

# THE MEDICAL AND SURGICAL REPORTER.

No. 1357.]

PHILADELPHIA, MARCH 3, 1883.

[Vol. XLVIII.—No. 9.]

## ORIGINAL DEPARTMENT.

### COMMUNICATIONS.

#### CONCERNING SPIROMETRY.

BY A. H. HOY, M. D.,  
Of Racine, Wisconsin.

In the October 7th, 1882, number of your journal, I asked of your readers information concerning spirometry, making six questions which I desired answered. Three communications have been received concerning the matter.

1. A reply from a well-known professor of diseases of the chest, who says he has no faith in spirometry, and considers the sources of error too numerous to be overcome. On receipt of this, I took occasion to address a note to the gentleman, asking for more definite information, and received a reply saying he had really never used the instrument (a water spirometer) but a few times, and had given the matter no especial study or attention.

2. The following letter from Dr. Lewis Sherman, of Milwaukee, Wisconsin:

"I have used the spirometer more or less regularly for the last twelve years. Several thousand observations have been made. I have used an instrument of my own construction. The apparatus consists of a water meter, corrected to the temperature, according to the condensation of moist air at 99° F. to 95° F. The readings of the ordinary water meters and rubber bags vary for the same lung capacity as the temperature of the atmosphere.

"Moist air condenses more than dry air, with the same degree of reduction of temperature. There are two forms of my instrument, one with

an elastic scale and thermometer, and the other with a fixed scale and thermometer, with a table for reduction of the reading as in the alcohometers.

"The sources of error are, the imperfect construction of the instrument, and inexperience in the muscular control of the respiration.

"According to my observation, the available capacity may be increased from ten to twenty per cent. by the habitual exercise of forcible inspiration and expiration, such as is required in using the spirometer.

"The spirometer is the best known instrument, or means, for measuring lung capacity. Successive observations on the same patient show quite accurately the progress of the disease in the lungs. These successive observations gave much more reliable results than isolated observations."

The third communication is from Dr. William W. Rodman, of New Haven, Connecticut, as follows:

"I have used a spirometer for several years, first Lewis' and later Marsh's rubber instrument. The cases would number hundreds, and the separate trials, thousands.

"Marsh's instruments break very readily. Two of the bags burst in my office yesterday. They require considerable practice, or mistakes will occur. Properly used, I think them useful, but I want a better spirometer than any I know of. A feeble patient has to be taught carefully how to use the instrument.

"It is often at first utterly impossible to direct the nervous energy with this novel respiratory effort. No final judgment can be reached in many cases until the first difficulties are overcome by repeated trials carried through several days.

The patient must be watched, taught, encouraged and cautioned. Definite results can be reached finally, and the vital capacity of the individual determined.

"I have found a few persons, men and women, who, at the first trial, would show a measurement far beyond the normal limit.

"As a general rule, a limit is reached after a few weeks, beyond which it is difficult to advance. I have found, however, where this limit had apparently been reached after faithful trials, that some new stimulus would give a further advance. Such a stimulus I have found in the massage manipulations, and also in static electricity. The galvanic current, in my hands, has failed to educe any such results, though I have repeatedly tried it both in mild and in heavy currents. I do not think that the Faradic current will serve this purpose, though my experiments with it are limited.

"The most striking results in my hands have occurred by the use of the spirometer immediately after stimulation with static electricity. I have been accustomed to use Hutchinson's table of vital capacity, and know of no other.

"With the proper caution and limitation, I think spirometry very valuable for diagnosis and prognosis. I am accustomed to aid my conclusions in various ways; for example, by measurements with the tape, and with callipers. Within moderate limits, I think that the conclusions to be drawn from the use of the spirometer can be relied on, and I have known mistakes made by famous auscultators. In the use of this instrument, the patient is encouraged to make efforts which are likely to be of great service, unless they are too violent at first, or are made in a cold room.

"As long as progress is made, the courage is kept up, and in cases where the indications are unfavorable, the instrument itself tells the story, and the physician is not obliged to put an unfavorable prognosis into words."

I desire to reply to these letters through the *MED. AND SURG. REPORTER*, and thus make public the results of my experience in spirometry, and to describe the means used, which are so simple as to be within the reach of any one, and I hope some interest may be awakened in the subject. In fact I know of no study in which physicians will find so much to interest and instruct them, as in spirometry; more especially as it would seem to be a new field for work, judging from the paucity of replies I received to my inquiries; and better instruments are to be invented, and more correct tables devised to work with.

I use the rubber bag spirometer, known as Marsh's, with certain modifications and additions. Finding that the bags furnished with the instrument were easily broken, and varied too much in thickness, I procured a supply of rubber gas balloons, such as are sold to children as a toy, at fairs and circuses. These can be had of F. Paturel & Co., New York city, at a cost of about three dollars and fifty cents per gross.

These answer the purpose admirably, and leave nothing to be desired in this respect. I use also a beef's bladder, which is prepared for the purpose by divesting it of the outer and coarser muscular coats, and then turning it inside out; this can readily be done when the bladder is well macerated in water. Next mount it on a rubber tube (similar to that used in the spirometer) and inflate the bladder to its fullest capacity, and allow it to dry thoroughly. After this is accomplished, by repeated rubbing, and folding it in the hands, it will become as white and soft as a kid glove. The next essential is a pair of steel callipers, with a scale of quarter inches, suitable for measuring the width of the shoulders from acromion to acromion.

Before using the spirometer, it is very necessary to be sure that the tape scale shall read accurately. To insure this, I have a fixed scale by which I set the tape, and by which I prove my spirometer from time to time. This consists of a piece of wood three feet long and three inches wide, scaled in its length into inches and fractions of an inch. At one end an upright piece one foot high is fastened, exactly at a right angle. A carpenter's square is held on the long piece of wood so that the short arm is parallel with the upright; the rubber bag is now inflated, while it remains between these two, until it barely impinges on each, and the diameter of the inflated globe is at once known from the scale on the long arm of the frame. The diameter of a sphere being known, a simple calculation gives the cubical contents. The tape scale is now fastened to the bag so as to read the correct amount. I generally prove the scale to three diameters, viz., six, seven, and eight inches, the capacity of these being one hundred and thirteen, one hundred and seventy-eight, and two hundred and sixty-eight cubic inches. The bladder is used, often expelling all air from it by simply folding it in the hand, to receive the air from the lungs of such persons as have not the muscular power to inflate the rubber bag. The air once received into the bladder is transferred to the rubber bag by connecting the mouth-pieces, and measured as ordinarily done.

Vital N.

6.25
6.50
6.75
7.00
7.25
7.50
7.75
8.00
8.25
8.50
8.75
9.00

I claim  
capacity w  
ing to th  
ing norm  
reach the

It is well to use the rubber bag and the bladder in any cases that are in any way doubtful or uncertain. From four to six observations should be made, half with the person standing and half in the sitting position, and the average of these should be taken as the vital capacity.

The calipers are used to determine what I take the liberty of terming the "vital number" of the person. It is ascertained by taking the calibre of the shoulders from acromion to acromion, adding to this one-half an inch, and half of this sum will constitute the "vital number."

This is not, as it may seem, an empirical formula. It is a sort of "lightning-calculator" mode of reaching certain dimensions of the chest that I formerly made several measurements and calculations to attain. Concerning the fixed ratio which the different measurements of the chest bear to each other, I would refer to page 37 of "Hammond on Hygiene." The vital number having been ascertained, the vital capacity is found by reference to the following table, which I have prepared and tested by repeated observations. Hutchinson's scale of vital capacity, based on the height of the person, failed too often to give satisfaction; and this is not to be wondered at when we remember that his observations and deductions were made in British soldiers, men who may be supposed to be somewhere near anatomically correct and robust as to health—such, in short, as are never seen in a doctor's office. The table I have devised is based on a ratio between size of chest and vital capacity. I give the numbers from six to nine, increasing a quarter of an inch each, which I regard as accurate enough for all purposes.

Vital Number.	Vital Capacity.	
	MALE.	FEMALE.
6. . . . .	108. . . . .	82
6.25 . . . . .	122. . . . .	90
6.50 . . . . .	137. . . . .	102
6.75 . . . . .	153. . . . .	112
7. . . . .	170. . . . .	124
7.25 . . . . .	190. . . . .	136
7.50 . . . . .	200. . . . .	150
7.75 . . . . .	230. . . . .	164
8. . . . .	240. . . . .	180
8.25 . . . . .	250. . . . .	186
8.50 . . . . .	260. . . . .	194
8.75 . . . . .	290. . . . .	214
9. . . . .	330. . . . .	240

I claim that a person possessing the vital capacity which their vital number calls for according to this table, may safely be set down as having normal and healthy lungs. If they do not reach the standard it may be on account of mus-

cular weakness of the respiratory apparatus, or it may be a filling up of the air-cells, or loss of lung tissue. The cause and nature of the failure to reach the normal vital capacity is for the physician to determine from other data to a beginner in spirometry, the following points will be of aid:

1. A person may be in his usual or comfortable health and still be using, or have the use of, only a part of his lung tissue, and yet have no disturbing chest symptoms.

2. Persons past middle life, or who are aged, may have a carbonaceous deposit in their lungs, which does not constitute a disease. The osseous frame-work of the chest of this class of cases loses its flexibility also, and due allowance must be made for this.

3. Those who have long used their lungs violently will show a vital capacity far beyond this table. The fact is, their lungs hold more than the normal amount of air. They are stretched, not to say developed. It does not, by any means, follow that their lungs are the better for it.

4. Learn spirometry first by measuring the lungs of as many vigorous, healthy subjects as possible; next examine those whose lungs have been, or are now diseased, cases whose history you are familiar with, and who are not now under treatment for lung troubles, but who are in their usual health. Pass from these to those in all stages of diseased lungs, and I am sure you will establish some points you can rely on with confidence, and will be able to make a diagnosis and prognosis in very many cases, which, with auscultation and percussion, would have embarrassed you seriously. If startling inconsistencies or contradictions occur, make every effort to clear them up, or devise some new plan by which their repetition can be avoided.

I should be pleased to hear from any one interested in spirometry, who may wish further information.

#### A PECULIAR TYPE OF FEVER.

BY DR. J. M. PINKSTON,  
Of Alabama.

As it may be of interest to the readers of the REPORTER, I ask permission to give notice through its columns of a very peculiar type of fever that prevailed in this country during the year 1882, commencing about the 1st of July, and subsiding about the 1st of December, which affection leads me to believe there are, perhaps, some epidemics of mistaken typhoid fever, as it is pronounced by some physicians to be typhoid. There seems

to be a variety of opinions as regards diagnosis, some regarding it as a congestive form of remittent fever; others typho-malarial, typhoid, etc. I will proceed to give the symptoms and peculiarities as correctly as my experience in such cases will allow me:

The patients usually have the premonitory symptoms of typhoid fever, with, in most instances, a slight pain in the stomach a day or two before access of fever. The fever is usually ushered in with a chill, followed by headache, nausea, and vomiting; in some cases, cold feet and hands, and tenderness and continuance of pain, in most cases, over region of the stomach, and almost invariably tenderness at a point midway between the hips, but no iliac tenderness. The tongue is usually a little red around the edges, and lightly furred in the commencement of the fever, and very heavily coated and very red, as in typhoid fever, a few days afterwards. The bowels and stomach are generally uniformly tympanitic, though sometimes only a portion of the bowels, and occasionally in the commencement, the bowels are free from tympany altogether; but the stomach is most invariably so, from beginning to end. The bowels are usually constipated: in some cases so much so it requires an enema from time to time to move them. I should have stated that the fever in the commencement is high, in children sometimes attended with convulsions. Two of my patients were seized with convulsions, the first symptom noticed, though no doubt the usual prodromic symptoms existed unnoticed. The symptoms in the commencement, in some cases, indicate violent congestion of the stomach and bowels, and, as indicated by breathing, congestion of lungs, but there are no physical signs thereof. Some cases also have a slight sore throat, enlargement of tonsils, and a little irritation of bronchial tubes, and consequently a little cough.

The above symptoms are all that are observed in a typical case of this fever, except as to the movements from the bowels, which are always mixed more or less with mucus, and sometimes the larger portion consists of much.

Now a few words as to treatment, which, medicinally speaking, presents nothing peculiar, if viewed from a natural pathological standpoint, as suggested by the symptoms, and not as typhoid fever. The first object in treatment is to relieve the engorged state of stomach and bowels, with the most soothing medicine possible. I prefer calomel for the purpose, which I usually give in divided doses until I get several free movements from the bowels. In the meantime I direct a hot

mustard foot-bath, and cover the stomach and bowels with a large mustard plaster, and not a poultice, which I continue to use daily, until the patient is decidedly convalescent. After thorough evacuation of bowels, give quinine in decided doses, not less than forty or fifty grains to an adult daily. I usually commence at midnight, regardless of fever or circumstances. If the patient is seen late in the evening, it may be necessary to combine calomel and quinine together. I almost invariably give good whiskey or brandy from the beginning—a teaspoon to a tablespoonful with each dose of quinine: which, owing to the great amount of torpor of stomach and bowels and general prostration, I regard as a very important auxiliary indeed. After the first twenty-four hours, give turpentine in moderate doses, for a few days.

The above comprises the treatment, with the exception of a few details, such as the use of opiates, diaphoretics, etc., as may be indicated.

A word as to hygiene, which is a very important desideratum in the management of this affection. The diet should be absolutely in a liquid form, and the most nourishing and concentrated. It should be taken in small quantities, at short intervals, and continued in like manner for a few days after cessation of fever, during which time the patient should remain absolutely quiet in bed.

As to the peculiarities of the fever in question, if improperly treated or not treated at all, and in some cases in spite of treatment, it will last from two to six weeks; but if taken in time with all the symptoms well developed, and properly treated, will yield, in my experience, almost invariably, within thirty-six to seventy-two hours; if due precaution, as to diet and exercise, is not taken, the patients will have a relapse from time to time until the affection seems to become a fixed condition, and will not yield under any manner or form of treatment—cases exactly identical with others that subside within thirty-six or forty-eight hours. I have observed some cases of intermittent fever of the quotidian type that were followed by a greater amount of prostration after a few paroxysms than ordinary remittent fever of a week's duration: these cases presented the usual symptoms of the cases under discussion, red and furred tongue, tympany of stomach and bowels, tenderness and pain in the epigastric region, etc.; in fact it seems to have been a modified form of the same affection. I have seen a few cases of diarrhoea followed by dysentery, attended by the general symptoms of the above affection, red tongue, tympany of stomach and bowels, etc., without the



fever. I have also seen a good many cases of sore eyes, attended with severe neuralgic pains, red tongue and enlargement of papillary glands on the end of tongue, which was always the case in this affection, that were not benefited by the usual treatment, but yielded readily to a cathartic followed by the systematic use of quinine for several days. Whether the sore eyes were due to the same cause as the fever, I am not prepared to say, though I have not seen any one with sore eyes or dysentery, that afterwards had this peculiar type of fever. Now the mere idea of a large proportion, five-sixths or perhaps nine-tenths of my cases, having yielded to treatment in a few days, excludes the possibility of it being typhoid fever, or "typho-malarial," which latter, in my experience, will not yield in less than ten days, under any treatment that may be instituted; and the fact of it yielding in so short a time has given rise to the opinion of some that there is no such combination. As to the diagnosis, I regard the fever as dependent on a circumscribed inflammation of the bowels, and, in the absence of a name for the affection, I have pronounced it catarrhal inflammation accompanied by a general engorgement of the entire mucous surface; the powers of digestion are almost entirely perverted, there being a total inability to digest solid food of any description, and milk or other liquid food, except in very small quantities; I could predict a relapse with almost as much certainty, after giving a glass of milk, as if solid food had been given; they were generally unable to digest as much as half a glass of milk at one time.

It is reasonable to suppose that when the stomach is so very deficient in powers of digestion, its powers of absorption are also deficient; for this reason, as well as because of the great amount of prostration from the beginning, I give a little whiskey with each dose of quinine, which answers a double purpose, as a stimulant and promoter of absorption. As to diagnosis, I should like to have the opinion of older members of the profession.

#### THE RECUMBENT POSITION IN TYPHOID FEVER.

BY DR. GEO. HAMILTON,  
of Philadelphia.

In the *REPORTER* for February 3 may be found "Observations on the Management of Enteric Fever," read before the College of Physicians by Dr. James E. Wilson. After the reading of the paper, Dr. Hamilton is quoted as "speaking of the great importance of preventing hypostatic conges-

tion by changing the position of the patient from time to time." These are the words, however, of Dr. Wilson, and were expressed by him after Dr. H. had said: "In view of the frequent occurrence of hypostatic congestion in the latter stages of typhoid fever, and its great danger, would not the plan recommended of placing the patient in bed from the first moment of attack, and keeping him there, in the recumbent position until the termination of the disease, not suffering him to arise even to obey the calls of nature, be well calculated to increase the liability to the dangerous condition alluded to?" That there is danger in this exceptionally novel, tentative mode of treatment, is tacitly admitted in the advice to change the position of the patient frequently. But how can this effectively be done, since the patient is to be kept, without intermission, in the recumbent position, so that whether upon his back, or on the right or left side, he is yet recumbent? Again, a very large number of typhoid cases now seen are slight, so that during the first two weeks the patients are able to move about, change their position in bed, get out and into bed with comparative ease when nature calls, and would much prefer so to do than submit to a regimen so irksome and inconvenient as that proposed. But this is not all. Many persons, females especially, are shocked at the idea of remaining in bed while urinating, or the bowels are being moved, and the fact that cleanliness in this way can scarcely be secured presents another objection. Nor is this all, for many persons are well nigh incapable of freely urinating, or evacuating the contents of the bowels, whilst in the recumbent posture, and the efforts of a patient to do so are not only annoying, but exhausting.

Let it be borne in mind that these objections have reference only to the earlier periods of the disease, and to patients who are quite able to assist themselves; for in the latter part of typhoid fever, when the stools are apt to be frequent and loose, and the patient exhausted, the bed-pan and the urinal, or something equivalent, are indispensable. A few years before the death of Dr. Wm. Gerhart, he informed the writer that fewer deaths, in proportion to the number of cases, had latterly occurred in this city than in the earlier years of his practice. He knew of no cause for this, but had known the same thing to occur many years before in Paris, where he had assiduously applied himself to the investigation of typhoid fever, and thus laid the foundation of his future eminence as an authority upon this subject. The rate of mortality in the hospitals of

Paris, he said, had varied in consecutive years from one death in three to only one death in seventeen to twenty cases, and this too under the same physicians, similarity of treatment and conditions. If the ratio of mortality in typhoid fever cases in this city is not greater now than at the time alluded to, it is evident that many of them are of a character that does not demand, in the early stage, the recumbency and quietude enjoined, and that the spontaneous tendency of a large majority of these cases is to recovery. A constant and long-maintained recumbent position, and the inaction that attends it, are not, as a rule, beneficial to the sick or to those in good health, as may be seen in the backache and headache so often complained of after a few days of confinement to bed. In typhoid fever there is often a disposition to congestion at an early period of the disease, and every effort should be made to prevent this unfavorable condition. But can this be done by the plan proposed? Physical inaction begets vital, molecular inaction; and that is the prelude too often to passive congestion, and this means diminished vital power, the result of the imperfectly oxygenated blood that attends such congestion. Whenever venous congestion takes place, the brain, spinal marrow, and, consecutively, the whole nervous system, deprived of the stimulus of well oxygenated blood, languishes, and hypostatic congestion, not of the lungs only, but of every other organ of the economy, ensues to a degree that renders doubtful the recovery of the patient.

This is, in fact, the great source of danger in typhoid fever, and probably occasions the death of more patients than supervening inflammation, acute or sub-acute, of the brain respiratory or abdominal organs, or perforation, combined. A large majority of the deaths occur in the third or fourth week, and it is at this period of extreme exhaustion, when low muttering delirium, stupor, visual illusion, picking at the bed clothes, twitching of the tendons, and other analogous symptoms occur, that the propriety of the term typhoid is made manifest, as well as the extreme danger of the patient. During a practice of more than half a century, four cases have come under notice in which the patients were not confined to bed, but regularly dressed themselves every morning, at times going out to walk or to attend to some business or other matter, and again throwing themselves upon a bed or couch for rest. Of these one of singular interest may perhaps here be alluded to. A wealthy farmer, residing on a beautiful site on the Brandywine, a few miles below the

battlefield, his wife, and a domestic, were attacked with typhoid fever. A married son occupied a house about two squares distant, and was in the habit of making daily visits to his parents, who, as well as the domestic, were well advanced in convalescence when the son was attacked with the disease. He was at no time confined to bed, but would occasionally rest upon a couch. In about three weeks from the attack he sent for me—the first visit of a physician: perforation had taken place, and in 35 hours he was a corpse. Cases, then, such as these may have occurred oftener than supposed, especially when no intercourse with another typhoid patient could account for the attack.

The prominent, peculiar feature in the paper of Dr. Wilson is found in the rigid and constant confinement of the patient to the recumbent position, from the moment of attack until its termination. This proposition brought to mind a lecture before the Philadelphia County Medical Society last season by Dr. Wm. Pepper, in which the same treatment was earnestly advised, a rather restricted diet enjoined, and a medication, as the writer thought, conservative and beneficial. Yet the almost unheard-of success, 98 per cent. of recoveries, is, under any aspect, of difficult explanation. If, however, after further and repeated trials of this treatment, a similar success is obtained, may we not all, with one accord, exclaim, "*Laus Deo!*" that the dread-inspiring typhoid is at length shorn of its terrors.

#### TYPHOID AND MALARIAL FEVER.

BY W. A. EDWARDS, M. D.,

Asst. to Prof. Clin. Med., Univ. of Penn.

By recording cases from one's practice, a mass of observed facts are at last accumulated which enable the profession to intelligently study and treat disease from experience and actual cases, rather than by theoretical niceties.

Compilations are of little value, and if the profession would devote their time (which many are giving to collecting other men's views) to simply putting on record their own observations, no matter how insignificant or unimportant a single case or example may seem to be, the aggregate would be a vast fund of knowledge which we may consult at any time with advantage. Above all, we should carefully study all cases that are not according to an admitted type, studying all exceptions to rules, never thinking of them as unmeaning or accidental.

As Sir James Paget says: "Not one of them is

without a meaning; not one but might be the beginning of excellent knowledge, if only we could answer the question, Why is this rare? or being rare, why did it, in this instance, happen?" The same eminent authority further says: "Good specimens, typical specimens (of disease), must be at hand for the teaching of pupils who have to study illustrations of the accepted descriptions of disease; but it is among bad specimens (non-typical) even as it may be among exceptional cases, that those who are past pupilage, though they may not cease to be students, may study the variations of disease."

I therefore present the following case as being somewhat out of the common:

On November the 28th, 1882, I was called to attend John C—, æt. 26. Upon examination, the patient was found to have a temperature of 104°, tongue heavily coated, hepatic tenderness, little, if any, enlargement of the spleen, bowels constipated. The abdomen presented a few non-typical spots. I was informed that the man was taken sick on the 22d, confined to bed, and on that date had a chill of moderate severity, followed by a fever and a sweat; this was repeated twice a day, at 2 p. m. and 3 a. m., for six days, the entire paroxysm, viz., chill, fever and sweat, lasting about three hours.

From the history, locality in which he had lived, signs, etc., it was diagnosed that our patient was suffering from a double quotidian intermittent.

Quinine was administered, as in those cases, followed by five grains hydrarg. chlor. mit. and a saline. The temperature was affected but little by the quinine, and the calomel produced a very exaggerated action. This put us on our guard, and the fact that we were unable to catch on a febrile period, although the temperature was taken six times in twenty-four hours, made us waver in the diagnosis, which was utterly routed, when, on the morning of the 30th, the eighth day of the disease, typical typhoid fever eruption appeared on the abdomen.

The patient now passed through an ordinary attack of typhoid fever, with a typical temperature sheet, marked, however, by great diuresis of the pulse, with impending heart failure, which was successfully combated by cardiac and general stimulants.

On the 30th of December he was up and about, though greatly weakened. Three days later he had a chill, after which the temperature rose to 104°, followed by a sweat; this was repeated at 2 p. m. and 3 a. m., as when we first saw him,

previous to the development of typhoid fever. The patient had his double quotidian intermittent for several days, until at last subdued by quinine.

It appears that the typhoid germs, poisoning, bacillus, what you will, was able to hold the malarial element entirely in abeyance until its course was run, when the malarial poisoning again asserted its mastery.

Once more we ask the question of Sir James Paget, Why is this rare? or, being rare, why did it in this instance happen?

There is not a day that most of us do not inhale or come in contact with the germs of some frequent or contagious disease, but they do not germinate in us any more than the seeds of tropical flowers in our streets or in fields to which the wind scatters them; we do not offer the fitting soil. When the germs do germinate, the product differs according to the environment. As above seen, our patient offered fitting soil for the germination of two distinct poisons.

## HOSPITAL REPORTS.

### CANCER OF THE CERVIX UTERI.—COMPLETE PROLAPSE OF THE WOMB, WITH HYPER-TROPHIC ELONGATION OF THE SUPRA-VAGINAL PORTION OF THE CERVIX.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, OCTOBER 4, 1882.

BY WILLIAM GOODELL, M. D.,

Professor of Clinical Gynecology in the University of Pennsylvania.

Reported by WM. H. MORRISON, M. D.

GENTLEMEN: The first case that I shall bring before you is a woman, 37 years of age. She has had a number of children. The history is that some time ago the menses began to be a little more frequent, and that between the periods, coition caused a little bleeding.

What does that mean? It means that the male organ impinges on something which is vascular; but in order that this body may be impinged upon, it must be outside of the womb. It might be a polypus; but a polypus usually causes a dribbling of blood between the monthlies, whether intercourse take place or not. She did not have this. She, however, did have a bad-smelling discharge. The inference, then, is that this is a carcinoma. Another condition which sometimes causes hemorrhage during coition, is bad laceration of the cervix. In such a case, the slightest touch on the large vascular granulation will cause some bleeding.

Let us look at her color. Where a carcinoma has existed for a long time, there is usually a

change in the complexion, and you get the carcinomatous cachexia. You see the leaden hue of her skin. This is typical. Occasionally it is difficult to distinguish the change of complexion of cancer from that of old malarial troubles.

Passing my finger into the vagina, I come upon a sore which is characteristic. It is crater-like. There is a hard, irregular margin surrounding an excavation, which has on its bottom and sides friable granulations. This is typical of carcinoma.

In making the diagnosis, there is another thing to be remembered. Cancer is exceedingly rare in women who have not borne a child. There are occasional exceptions to this rule, but they are rare. I venture to say that in ninety-nine out of a hundred cases the woman has borne a child. Why is this? It is because some injury has occurred to the cervix; or, as the Germans put it, the cervix has received insults, the insults of coition, but more especially the insults of parturition. The cervix has been lacerated; the delicate lining membrane is kept in a state of constant irritation from rubbing against the vagina as she walks, and from injuries received in coition; it is kept constantly raw, and is liable to degenerate into a cancer. I have frequently proved that the seat of carcinomas was an old laceration of the cervix, by finding the remains of the tear. I find here a notch on the right side posteriorly. The head was probably in the fourth position: the occiput posteriorly and to the right.

Another point—Do women who have not borne children have other kinds of malignant disease? Once in a great while they do. In one case where the woman was said never to have been pregnant, I found carcinoma of the cervix. In very rare cases, I have seen sarcoma of the body of the womb in women who have never had a child. As an aid to diagnosis you should remember that in order to have a cancer of the cervix, the woman must, in the vast majority of cases, have borne a child.

The history of these cases is often this: the menses ceased several years previous to their seeking advice; but several months after the menopause, there was a reappearance of the monthlies. If the woman has borne children, that in the great majority of cases means carcinoma. She usually does not consult a physician, for a feeling of pride comes over her; she thinks that she is getting young again, that rejuvenescence is occurring. She has heard of such cases; she has read of women who have become pregnant at the age of fifty or sixty. [By the way, I saw last week the report of a case where a woman of sixty-two had borne a child.] After a time, the bleeding becomes more marked, and she consults a physician, who finds a carcinoma.

Women are apt to be misled by the fact that they have no pain. They imagine that cancer is accompanied by excruciating pain. In most localities cancer is a very painful affection, but on the cervix it usually does not give rise to more discomfort than is felt at the monthlies. This is because the cervix is an insensible part. After a time, however, when the disease invades the body of the womb, where there are many nerves, she suffers the tortures of the damned; the pain is excruciating. One of my patients had to take

thirty-five grains of morphia a day in order to relieve it. The stomach would get so accustomed to it that to get its effect I had to give it by the bowel, then by hypodermic injection, and then by the mouth again.

The examination that I made has caused a little bleeding. That is one reason why you should never use a speculum in these cases. The finger tells the whole story, and a speculum may cause a hemorrhage difficult to control.

What about the prognosis? It is very unfavorable. Out of all the cases on which I have operated and of which I know the after results, only three have I considered cured. Still I can prolong life, and that is a great thing. In some of the cases on which I have operated, the disease has not returned in the cervix, but in some other part of the body. I have operated on women apparently in the last stages of the disease, so low that you would not give them two weeks lease of life, and have seen them get out of bed and live for over two years. My experience is that the older the woman, the more likely is the operation to be followed by success. In younger women there is more blood in the part, there is a luxuriance of growth, and they are not so apt to be benefited by an operation.

In reference to the treatment. You will find if you read the current literature, that within a year or so, Dr. Freund, a German surgeon, has removed the womb with alleged success for cancer; but the reports which have come from this operation have been so contradictory, the disease has returned so often, and the fatality of the operation itself is so great, that I am led to consider the operation inadvisable except under very exceptional circumstances. It should, I think, be performed only in those cases where the womb is movable; and it is rare that you see cases at this period. The womb is usually fixed, either by inflammatory lymph or by the cancerous material. In this case, the operation would not be advisable, for the uterus is fixed, and the disease has invaded the vagina posteriorly. I once made an appointment to remove the uterus, but a short time before the period fixed, the lady had a convulsion, and an examination of the urine revealed albumen. I therefore did not operate.

The operation which I shall perform to-day, will consist in scraping away the cancerous matter as far as possible and trying to reach healthy structures. The removal of the friable granulations will arrest the bleeding, which may not return. In doing this, I shall use this serrated curette and this fenestrated forceps. In buying a fenestrated forceps, you should get it with the obstetrical lock, so that you can fasten the blades securely together. I am removing a large quantity of this offensive material, and my fingers are going to smell very badly. How shall I get rid of it? I shall first wash them well with soap and water, and then with turpentine, which is very useful under these circumstances. Then I shall again use soap and water, with another go with the turpentine. After this I shall probably immerse them in carbolyzed water. Permanganate of potassium is an excellent disinfectant, but it has the disadvantage of so staining the hands that one is not presentable for several days after its use.

Now, suppose a woman comes to you and you



diagnosis cancer of the uterus, are you going to say, "Madam, I am very sorry to tell you that you have a cancer."? No, don't you do that. I should not tell even if she asked me to tell her the truth: but in the majority of cases they do not want to know, and will say to you, "Now, doctor, if you find a cancer, don't tell me." No matter how good a woman is, or how fully prepared for the future she may be, the knowledge that she has a cancer is a terrible blow, and she at once gives up, begins to go down hill rapidly, and soon dies. I never, except in very rare instances, tell the patient that she has a cancer; but I always tell some member of the family, or a friend, exactly what is the matter. Suppose the patient asks straight up and down, "Is it a cancer?" You do not want to tell a lie, and you do not want to say that it is a cancer. I get out of it in this way: I say, "This is not that kind of cancer which you understand. This is not a hard cancer like that which comes in the breast, and which is hopeless. You have a bad ulceration of the womb. It is not hopeless; there are cases which are cured." In the case which I have mentioned, where the lady took thirty-five grains of morphia a day, the word "cancer" never passed my lips, nor did it pass hers. None of the members of the family used that word, yet she knew as well as I did that it was a cancer. It was always spoken of as that "bad ulceration." About three years ago, I learned a lesson on this point. I was asked by a physician to see a near relative of his. His suspicion was that it was a cancer. I said to him, "Suppose that this is the case, shall I tell the lady?" He replied, "Yes, she ought to know; tell her by all means." After I had examined and found a carcinoma, I said, "I am very sorry to say that this is malignant," and then went on and told in so many words what the trouble was. She never rallied from that. She made up her mind that her days were numbered, and that there was no use in doing anything, and in a short time she died. I say then, never tell a woman that she has a cancer.

I have now made a funnel-shaped opening, into which I can readily introduce three or four fingers; before, I could barely get one in. I have not gotten into the bladder nor into the peritoneal cavity, but I am afraid if I go further posteriorly, that I shall open Douglas' pouch. I can trace the cancerous tissue to the internal os, but it does not pass to the cavity of the womb.

You see that while there has been some hemorrhage, still it has not been alarming. Sometimes there is unpleasant hemorrhage. During the operation you are not apt to have much hemorrhage if you work rapidly, and quickly get down to healthy tissue. If hemorrhage should occur, do not use Monsel's solution (the sub-sulphate of iron) for it makes plaster-like clots, and so corrugates and contracts the parts that you cannot continue the operation. Under these circumstances, ordinary cider vinegar serves an excellent purpose as a hemostatic, without the inconveniences of Monsel's solution.

Having removed as much as possible of this friable material, I purpose to apply fuming nitric acid to the raw surface. Usually, I prefer the application of Paquelin's thermo-cautery; but the

instrument is out of order, and I do not think that I can reach all parts as well with the cautery as with a fluid. I apply the acid with a piece of cotton, allow it to remain for a short time, and remove by injecting water. I then again apply the acid. It is not necessary to use alkalies or oil to neutralize the acid. If enough water is injected, it will so dilute the acid that it cannot injure adjacent parts.

There will be but little pain from the operation, but she will probably feel some soreness from the position in which the limbs have been held. When she is put to bed she will receive a suppository of the extract of opium (gr. j).

I am sorry to say that these cases are very common. Cancer is, I think, on the increase; but why it is, I cannot say. The disease more frequently affects the uterus than any other part of the body unless it be the breast.

You see that I have a little wound upon one of my fingers, but I am not afraid of inoculating myself with the cancerous matter, for I am in good health. If I were run down, it might be somewhat hazardous to get such offensive matter on a wound. It is the same with dissecting wounds, which occur usually towards the end of the session and with those who are overworked. This is not the case with venereal disease. No matter whether the health is good or bad, one is liable to be inoculated with syphilis. Nothing would tempt me to thrust my finger into a vagina in which I knew there was a chancre. It was only yesterday that I was asked to take charge of a patient who had a chancre, but I absolutely refused to have anything to do with it. Some years ago I got caught. After examining a case, there appeared on my fingers a sore which would not heal. I showed it to Dr. Agnew, and he pronounced it to be a chancre. For awhile I believe that I was the most unhappy man in Philadelphia. The diagnosis I think was incorrect, for the sore disappeared, simply leaving a scar, and was never followed by any constitutional symptoms. A burnt child dreads the fire, and I cannot be hired to put my finger where I know there is a chancre. Winter before last, in one of the ward classes, after I and a number of the gentlemen had examined the uterus in one of our patients, she called attention to a sore in the vagina, which proved to be a chancre. Some of the gentlemen looked rather frightened, and I cannot say I liked it very well myself.

A number of years ago, I attended a respectable woman in confinement. I then lost sight of her for several years, when she again wished me to attend her. When I called to see her, I noticed that she kept herself wrapped up. As on the previous occasion it had been necessary to use the forceps on account of the narrowness of the pelvis, I was prepared when the head would not come down, to apply the forceps. When I exposed her, I found the nates and buttocks one mass of venereal disease, and her neck was raw from the same trouble. I would have presented any gentleman with a hundred dollars to have applied the forceps and delivered the child. I stripped my arms to the elbows, and thoroughly applied a mixture of carbolic acid and vaseline. I then applied the forceps, using one hand only in the vagina. As soon as they were in position, I ran

out of the room, and carefully washed my hands, and again applied the carbolized vaseline. I then delivered her, and again washed myself with the utmost care. For a number of days I waited anxiously to see what the result would be, but no bad effects followed.

**Complete Prolapse of the Womb, with Hypertrophic Elongation of the Supra-Vaginal Portion of the Cervix.**

Our next patient is 34 years old and has had one child, which is near seven months old. Previous to her confinement, she says that she was perfectly well, but now the womb comes outside of her body. I there show you a complete prolapse of the womb.

What has been the history of this? There has been a laceration of the cervix, and consequently the womb received too much blood, for according to the old saying, "Wherever there is irritation, there is flux of blood." As a result of this, involution did not take place, and the parts were left too heavy, and in a plastic condition. The vagina, which, during pregnancy, is thick, did not become thin. The fundus of the womb was kept in place by the suspensory, and partly perhaps by the broad ligaments, while the neck was drawn down by the weight of the vagina and the bladder, and when it had descended far enough, the weight of the urine helped to elongate the cervix. We had then prolapse of the womb with hypertrophic elongation of the supra-vaginal portion of the cervix. That is a pretty long name; the first year students know nothing about it; the second year, a little more perhaps; the third year do not know much about it; and I know very little about it myself.

The supra-vaginal portion of the cervix is that portion of the neck above the attachment of the vagina, and is normally about one inch in length. In the present case it was this portion of the neck which was stretched, but gradually the ligaments holding the fundus in position began to yield, and at last the whole womb escaped from the vulva. It now does not measure more than three inches, but before the fundus began to descend it probably measured five inches.

This pouch containing liquid is the bladder. It always contains residual urine. We empty our bladders by the extrusor muscles. The great extrusor muscles are those of the abdominal wall, but here the abdominal muscles cannot act on the bladder because it is outside of the body. She tells me that in order to urinate she has to replace the bladder, and then the urine only dribbles away. This is because the urethra is sharply curved around the sub-public ligament. We have stenosis by angulation. If when you are watering the flowers through a rubber hose, a mischievous boy bends the tube, the water stops flowing, because you have stenosis by angulation, or, in plain old-fashioned English, narrowing by bending. In order to show that this is the bladder, I pass the sound through the urethra, and you see the end of it moving beneath the vaginal mucous membrane.

In treating this patient, the first thing will be to cure the laceration of the cervix. We shall wait a while, and then narrow the aperture of the vagina, and perhaps remove some of the redundant portion of the vagina. The operation is not a

first-class success. There are several ways of operating, but I have not yet decided which method I shall adopt. In the mean time, I shall give her some simple remedy, and advise her to replace the womb and introduce into the vagina a vaginal suppository containing five grains of tannic acid. That will often so contract the vagina as to prevent the uterus from escaping.

## MEDICAL SOCIETIES.

### OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, Thursday, January 1, 1883.  
First Vice-President, Dr. T. M. Drysdale, in the chair.

#### Death from Embolism.

Dr. William Goodell reported the death of the patient from whom he had removed an uterine myo-fibroma. (Case reported by Dr. Baer, in the discussion on Dr. Drysdale's paper, at the meeting of December 7, 1882.) The patient had progressed favorably, but some weeks after the operation, while straining at stool, she had evidently loosened a portion of clot on the proximal side of one of the venous ligatures. It passed into the pulmonary circulation, and quickly caused death.

#### What is the Proper Management of the Bowels After Perineorraphy?

Dr. Goodell had recently operated, for the relief of lacerated perineum, upon an insane woman, who had been sent to him for that purpose from an asylum. Her insanity commenced after labor, and was probably due to a complete laceration of the perineum, extending two inches up the rectum. It had always been his habit to prevent any action of the bowels during the first week after the operation. This patient, soon after coming out from the influence of the anesthetic, tore off the bandage from her knees, removed the catheter, and by severe straining efforts, secured a movement from the bowels. As she could not be controlled, laxatives were given to secure liquid stools and avoid straining. The patient walked freely about the ward from the day of operation. The doctor expected the operation to be a failure under such circumstances; but to his surprise, on removing the sutures he found that in the rectal portion and the important part of the perineum, union had taken place.

His attention has been called by this case to the question of the advisability of keeping the bowels constipated after this operation. He intends to try the effect of laxatives in future cases.

Dr. R. P. Harris reported the case of a woman who, after the operation of perineorraphy, would strain, and her efforts at defecation opened the wound to nearly its original extent. In a second operation on the same patient, the bowels were kept free and union was perfect.

Dr. E. E. Montgomery, after operating for lacerated perineum, does not use a catheter, but allows the patient to pass her water, as he does not consider healthy urine disadvantageous for a wound. He has been in the habit of using compound liquorice powder to keep the stools liquid. He has had good success in both primary and second-

any operations upon the perineum where the rectum was involved.

The following members were then elected

#### Officers for 1883.

President, Dr. Richard A. Cleemann.

Vice-Presidents, Drs. B. F. Baer, and W. T. Taylor.

Secretary, Dr. W. H. H. Githens.

Treasurer, Dr. Alfred Whelen.

Librarian and Curator, Dr. E. E. Montgomery.

Publication Committee, Drs. John H. Packard, Elliott Richardson, James V. Ingham, B. F. Baer.

Councillors, Drs. R. P. Harris, L. D. Harlow, Wm. Goodell, T. M. Drysdale.

Library Committee, Drs. Horace Williams, D. M. Cheston.

Committee on Proceedings, Drs. A. H. Smith, E. E. Montgomery.

#### Stated Meeting, Thursday, February 1st, 1883.

The President, Dr. R. A. Cleemann, in the chair.

Dr. B. F. Baer read the analysis of twenty-seven operations for the restoration of the Lacerated Cervix-Uteri, with special reference to the effect on Sterility and Labor.

In the discussion which followed the reading of Dr. Playfair's paper on "Trachelorrhaphy, or Emmet's Operation," before the Obstetrical Society of London, on March 1, 1882, Dr. Herman, in the course of his remarks, said that "The American literature on the subject consisted mostly of general statements. Few writers had published cases, and the cases were mostly complicated ones." There is some force in these words. But to avoid a monotonous repetition, it is desirable only to publish such as are strongly illustrative of the class to which they belong, or such as bear directly upon any point which may be under discussion.

In the *American Journal of Obstetrics* for January, 1883, Dr. P. J. Murphy, of Washington, D. C., makes some "Observations on the Effects of Trachelorrhaphy on Fertility and Parturition," and comes to the conclusion "That repair of lacerations of the cervix uteri is usually followed by sterility." Now, there is no doubt of the truth of this statement, so far as it goes; but I think that he ought rather to have said that in those cases in which sterility followed the operation, that condition also preceded the repair of the cervix in the majority of instances, either as a result of the laceration itself, or of its effects on the uterus and its appendages; and that the operation was not the cause of the sterility, but that it simply failed to cure it.

The only way to arrive at anything like a correct conclusion on this subject, is to take a number of cases (it need not be large) and analyze them, and this I purpose doing with mine.

Of the twenty-seven cases in which I have made the operation, six were either widows, or had reached or passed the menopause, and must therefore be excluded from the analysis. This leaves twenty-one cases to be reported upon in this inquiry. Of these twenty-one cases, thirteen had been sterile from five to sixteen years previous to the operation, and I think, for reasons which I will give farther on, that they ought also to be classed as beyond the probability of becoming pregnant. In the remaining eight cases,

pregnancy had occurred within five years, but had resulted in abortion in five. In twelve of the twenty-one cases, from one to five abortions had occurred in each subsequently to the occurrence of the laceration. This gives abundant proof of the ill-effects of the lesion and its results, subinvolution, chronic hypertrophy, cellulitis, oöphoritis, etc., on fertility.

Is the assertion that sterility usually follows, as a result of the operation, correct? I do not think so; provided, of course, that the operation was properly made, that the os was not made too small, and immediate union followed the coaptation of the parts, so that there was left the minimum amount of cicatricial tissue to interfere with the normal resiliency of the cervix.

The oftener abortion occurs, as a rule, the greater and more persistent will be the histological changes in the uterus and its appendages, which finally result in sterility.

The majority of cases in which the operation has been made have been of long standing, because the operation is new, and there were many old cases of so-called "ulceration" with chronic hypertrophy, waiting ready to be experimented upon with this, as they had been before with many other old and new remedies.

Is this last new remedy followed by any greater success than the old in the reduction of the size of a large uterine body, which has become hard and fibrous from connective tissue hyperplasia? I think not; and hence its failure to cure sterility of long standing, from this cause. But, for the cure of certain cases of hypertrophy of the cervix, inflammation, ectropion and abrasion of the mucous membrane, with their local and remote symptoms, and possibly, even probably, preventing epithelioma, and in the more recent cases for the cure of subinvolution, abortion, and sterility, the operation is an immense stride in advance of the old way of destroying the tissues of the cervix by amputation, or by the application of the hot iron or the potential cauteries. It is an advance, because it restores the cervix instead of destroying it.

The following case proves, I think, that abortion may result from laceration of the cervix, although none of the usual inflammatory consequences of the lesion are present.

Case 1.—Mrs. M. L., æt. 30, consulted me in January, 1881. She was delivered of her first child two years previously. The labor was rapid. The child was fully developed and vigorous. There was nothing unusual in the puerperal period, and she seemed to be well. Ten months after the birth of the first child she became again pregnant. Between the second and third months of gestation the product of conception was expelled with little pain, but it was followed by severe hemorrhage. Within three months, she was again pregnant, and aborted at about the same time and manner as previously. This was followed within six months afterwards by a third pregnancy, and abortion under similar circumstances. The last occurred about two months before she consulted me. She had absolutely no symptoms of uterine disease, such as leucorrhœa, menorrhagia, and the pain which always results from congestion and hypertrophy of the uterus; and expressed herself as feeling as well as ever

she had in her life. There was no evidence, whatever, of syphilitic infection, either in the patient herself or in her husband. They are both robust and well developed.

*Examination.*—The perineum and vagina were normal. The uterus was in normal position; it was neither congested nor enlarged; but the cervix was lacerated on the left side to a point beyond the vaginal attachment, apparently approaching and involving the fibres of the internal os. On the right side there was a mere fissure only. There was no hypertrophy, eversion, or abrasion of the mucous membrane. The sound passed to a depth of two and a half inches. I expressed the opinion that the lacerated cervix and the abortions stood in the relation of cause and effect; and I advised an operation for the restoration of the torn cervix.

On March 10, 1881, I denuded the surfaces, being careful to remove very little tissue, and to freshen the edges as far up towards the internal os as possible. I then placed six carbolized catgut sutures, and clamped them with shot. I used the gut suture here in preference to the silver wire, because, as the cervix was not large, and the tear principally unilateral, there would not be much tension, and for the additional reason that I especially did not want any cutting of the tissues by the sutures, which is more apt to occur when wire is used. Another advantage of gut suture is that the line of union need not be disturbed by the removal of the stitches. On the seventh day after the operation, I inspected the cervix through Sims' speculum, and found the sutures all *in situ*, though they were partially absorbed. Union was perfect. Two days afterwards the shot were lying loose in the vagina. There had not been the slightest discharge from the united surfaces since the operation.

On June 3, 1881, the patient reported that she had not menstruated for seven weeks, and there was every indication that she was pregnant. A week later I was requested to visit her. I was much chagrined to find when I arrived that she had aborted. This was very discouraging, but I found some comfort in the character of this abortion. More pain attended the expulsion, and less hemorrhage followed it, than on the previous occasions. This I ascribed to the restoration of the symmetry of the cervix, and its better retentive power.

On October 9, 1881, she reported that she was about two months pregnant, and feeling well; and on May 7, 1882, she was delivered at full term of a fully developed, healthy boy, after a perfectly normal labor of six hours' duration. Examination two months afterwards revealed not the slightest laceration of the cervix. The mother and child are both well.

*Case 2.*—Mrs. M. R., æt. 21 years, consulted me in May, 1878. She had been delivered eight months before of her first child; the labor being tedious, was terminated with the aid of the forceps. The puerperal period was also tedious, and she had ever since been troubled with pain in the hypogastric and lumbar regions, together with a profuse leucorrhœa. Coition was painful, and followed by slight hemorrhage. She was anemic, and had lost flesh.

*Physical Exploration.*—The perineum was slightly

lacerated, and the vagina relaxed. The cervix uteri was pressing low down on the pelvic floor, and lacerated, bilaterally, but to a greater degree on the left than on the right side. The tissues were soft from engorgement, and the mucous lining of the cervical canal greatly hypertrophied, everted, and abraded of its epithelial covering, so that it bled on the slightest touch. The uterine body was likewise congested and tender. The sound gave a measurement of minus three inches.

I treated this patient locally and constitutionally for almost a year, with marked general improvement, and although the local condition would improve, the benefit was only temporary. On April 30, 1879, I made the operation for lacerated cervix, placing seven silver sutures. Perfect union resulted.

Three months after the operation she became pregnant, and was delivered spontaneously at full term. The labor was so easy that delivery occurred before the arrival of the physician. Two months after the labor she called at my office, at my request, and I found the cervix healthy, although there was a very slight fissure on the left side. She stated that she had been well since the operation.

*Case 3.*—Mrs. A. B., æt. 34 years, was sent to me in July, 1880. She had had eight children, the youngest of which was six months of age. She stated that she always menstruated during lactation, and became pregnant when her children were about eight months old. Since the birth of the last child she had had metrorrhagia every three weeks, lasting one week, and a profuse leucorrhœa for years. She complained of pain in the lumbar region, with a heavy dragging sensation in the pelvis and on the top of the head. She was emaciated, and so pale that she appeared bloodless. She had become hysterical.

*Touch.*—The perineum and vagina were very much relaxed. The cervix uteri was far back, and presented a nodular surface, the result of three deep rents in its tissue, one of them extending through the centre of the anterior lip, flush with the vaginal junction. There was marked ectropion of the mucous membrane, with abrasion. The body of the uterus was anteverted, and only slightly larger than normal.

I placed this patient upon the "rest treatment" of Dr. S. Weir Mitchell (modified somewhat to suit the circumstances), in addition to the necessary local treatment. Her improvement was very marked, and on October 10, 1880, three months after she first came under my care, I operated for the laceration, and secured immediate union.

Under the date of October 27, 1881, a year from the date of the operation, I find this note in my case-book: "Returns to-day at my request for examination. She has improved so much in appearance that I scarcely knew her, and she states that she has been well since a short time after the operation. The cervix is normal."

I recently received from my friend, Dr. Wm. L. Taylor, the following note concerning this lady:

"DEAR DOCTOR: In answer to your inquiry regarding Mrs. B., I will state that she was confined six weeks ago. The labor was natural, and if it differed in any way from her former labors, it was more rapid. I examined the cervix to-day, and found the external os patulous, but no laceration."

(To be continued.)



## EDITORIAL DEPARTMENT.

### PERISCOPE.

#### Electrical Stimulation of the Uterus.

The *Lancet* says that the influence of electricity on the uterus, whether empty or gravid, is a point on which authors have made various statements. The difference of opinion may be due to the circumstance that the conclusions have been drawn from the somewhat uncertain field of clinical observation. M. Dembo, in a note presented to the Académie des Sciences by M. Vulpian, has endeavored to decide the question by experiments on animals. His observations at present relate only to the non-gravid condition. In the rabbit, direct faradization of the uterus or of one of its cornua causes a contraction at the point to which it is applied, and which extends for a distance of about twenty millimetres, but never reaches the other cornu. If one electrode is applied to each cornu, both can be made to contract in the neighborhood of the poles, but not in the interval between them. Very different, however, is the effect when the application is made to the vagina. If both electrodes are applied to the vesical wall of the vagina, a manifest contraction is produced in both parts of the uterus, vermicular in character, passing from below upwards. If the application be made to the lateral portions of the vaginal wall, a contraction is produced only in the corresponding cornu. Local contractions on the corresponding side can be produced by placing the electrode on certain points in the broad ligament, but the contraction never extends to the whole uterus. It is impossible to produce contraction of the non-gravid uterus by faradization applied through the abdominal wall. The excitability of the uterus of the rabbit was found to vary according to the age of the animal, and according to whether it had borne young or not. That of a young animal is so irritable that manifest contractions are excited by mere exposure to the air, but in old rabbits the uterus is much less susceptible. In some dogs and cats no contraction of the empty uterus could be obtained by faradization, in others slight contractions with distinct pallor were produced. Faradization of the vaginal wall caused pallor of the mucous membrane, and also of the whole uterus, due apparently to contraction of the vessels, but no contraction of the substance of the uterus. Frankenhauser found that stimulation of the aortic plexus caused a manifest contraction of both cornua, and it is highly probable that an analogous nervous plexus is situated in the vesical wall of the vagina. The observations were made on animals under the influence of either chloral or curara.

#### Radical Cure of Inguinal Hernia.

Dr. James Whitson reports the following case in the *Medical Times and Gazette*, January 27, 1883:

John McB., aged fifty-six, laborer, was admitted

on October 18, 1882, to the Royal Infirmary, suffering from what was supposed to be a strangulated inguinal hernia, which, however, Mr. Greenhill, house-surgeon, succeeded in reducing, without difficulty, the ring being a wide one, and the distance, in consequence, between its pillars being very considerable. The patient having afterwards expressed a desire to be relieved of his infirmity, which was a constant source of annoyance as well as danger to him, I resolved to perform an operation for the radical cure of hernia; but, before doing so, I thought it expedient to give him a few days' rest in bed, so that his bowels might be carefully regulated, and any shock which he had suffered from on admission might have had time to pass off.

On October 27 the patient was put under chloroform, the pubes carefully shaved, and, with the kind assistance of my friend, Mr. Clark, I proceeded to operate by first of all transfixing a fold of skin over the inguinal ring, and cutting outwards. The various structures between the skin and the mouth of the canal were successfully divided on a director until the sac was reached, when it was opened into, and a large portion of it removed. Wood's needle, threaded with the strongest chromicised catgut, was then passed through the upper and outer side of the ring, carried over towards the inner pillar, and when brought into contact with the skin on that side, the latter was pulled away in the direction of the mesian line, so as to permit of the exist of the point of the needle at the opening already made. Three separate sutures of catgut were introduced in this way; and the cut edges of the sac were stitched together with moderately-sized gut. The pillars of the ring were then firmly approximated by tightening the sutures, and securing them with reef-knots. A decalcified drainage-tube, threaded with horse-hair, was inserted into the wound, the margins of which were brought together with two button sutures, and accurately apposed by means of several stitches of fine gut. Protective plaster and gauze were next applied in the usual way, and an elastic bandage assisted in keeping the whole in excellent position. The dressings were changed on the second day, when the hair was withdrawn from the drainage-tube, and union by first intention had taken place along the whole line of incision, with the exception of the lowest point, where a necessary aperture for the exit of the discharge remained. It is needless to give further particulars of the progress of the case, as the wound followed a truly aseptic course, and the patient made an excellent recovery. He was dismissed, cured, on December 2, 1882.

#### Hysteria in Young Boys.

From the *Med. Times and Gazette*, January 13, 1883, we learn that M. Charcot has recently (*Progrès Médical*, 50 and 51, 1882) published a lecture devoted to proving that hysteria in its ordinary and typical form may occur in young

boys. We should hardly have thought that a separate lecture was needed to demonstrate the fact. Even amongst such a non-emotional set of beings as the English are, we yet have ample proofs afforded us that boys can and do have hysteria, even when mere infants, as Dr. Barlow has on more than one occasion shown. One of the patients whom M. Charcot showed to his class (and we need only quote this one) was a young Hebrew, aged thirteen, who had been brought by a fond but exceedingly foolish father from Russia to Paris. The history of his malady was that he had a persistent headache, a spot of exaggerated sensibility on the top, and an attack coming on every evening about the same time, consisting of an increase in the headache, noises in the ears, and a sensation of thoracic constriction. At other times, on the right side there was analgesia to a prick, to cold, and to faradisation; taste, smell, and hearing were diminished; and there was contraction of the field of vision on this side, as also some impairment of color-vision. During the attack, he used to lie down on a couch doubled up, with his hands up to his head in a fixed position, his eyes filled with tears. In a few minutes the attack would pass off without any of the ordinary manifestations of the termination of a hysterical attack. The father, unintentionally, doubtless, adopted the best means to insure an occurrence of the attacks; for as the usual time of their appearance drew near, he would pull out his watch and begin asking the boy how he felt, and expressing sympathy for him in his sufferings. As might be expected, a speedy cure was effected when the boy was quite separated from his father, though it was about a month before the amblyopia had finally disappeared.

#### Hydrargyrum Formidatum in Syphilis.

The *Medical Times and Gazette*, January 6, 1883, says that Professor Liebreich brought forward, at the last meeting but one of the Berlin Medical Society, a new drug for the treatment of syphilis by the subcutaneous method. This drug rejoices in the name of hydrargyrum formidatum, and is, therefore, merely a different form of the old cure for syphilis. The mode of its preparation was not stated; chemically, it belongs to the amide group, in whose structure the monovalent amidogen (NH<sub>2</sub>) plays an important part. Liebreich was led to think of this new preparation from the notion that the ordinary amides of the body, of which urea may be regarded as the principal one, pass out of the organism in an undecomposed state; when, however, an amide is in combination with a metal, decomposition readily occurs, and the metal is reduced and deposited. Liebreich repeated his experiments before the Society, and showed that these conjectures were quite true for the metal mercury. It is supposed, therefore, that the formamide of mercury, after the hypodermic injection, undergoes disintegration; and so the mercury is set free, and is able to exert its well-known power over the lesions of syphilis. The preparation is easily soluble in water, is of neutral reaction, does not coagulate albumen, is not precipitated by caustic soda, and the presence of mercury can be demonstrated by means of sulphide of potassium. The drug, when injected

under the skin, produces its effects very surely and rapidly. This is not regarded as a disadvantage, for the medicine is said to be easily borne, and has never produced salivation in Liebreich's hands. There is very little pain attendant on the injection, which has never excited any inflammation. From a half to a whole of a Pravaz syringe (a 1 per cent. watery solution) may be injected twice or thrice daily. Liebreich looks on the preparation as the best we yet have for subcutaneous injection.

#### Teeth Injured by Tobacco.

In the *Southern Dental Journal*, for January, 1883, John G. Harper, D. D. S., writes as follows:

"I was taught that the use of tobacco in any form was not injurious to the teeth, and in all the literature of the profession I have found nothing alluding to what I desire to present to the profession; namely, the evil effects upon the teeth, caused by the constant use of tobacco. My attention was first drawn to this evil just one year ago this month, when I was filling the teeth of a patient who has for years been in the habit of smoking and chewing a great deal of tobacco.

"The injurious effects are not very noticeable until the person has been using the weed for about fifteen years, but the use of the pipe to excess will show its injurious effects in less time. Tobacco chewing is the most injurious, as the tobacco acts as an irritant in two ways, mechanically and by its properties—mechanically by particles of the tobacco being forced between the gums and the teeth. We have proofs of the irritable effects of tobacco in snuff. The direct effect of using tobacco is the recession of the gums of all the teeth, but more especially those on the side of the mouth used most in chewing the tobacco. The sequel to this recession may cause the loss of one or more teeth, by a diseased condition of the pulp, resulting from its being irritated by having the neck of the tooth and the root exposed to thermal changes in food and in the air we breathe. Exostosis and calcification may result.

"Tobacco chewers' teeth wear away on the grinding surface rapidly, caused by the gritty substances naturally entering into the tobacco. The gums recede and are red and congested, and underneath the gum a narrow line of dark tartar is nearly always present, and particles may be found still further toward the apex of the tooth."

#### Hegar's Operation.

From the *New York Med. Jour.*, January 27, 1883, we note that Dr. C. C. Lee, the President of the New York Obstetrical Society, related the following case: An unmarried woman, aged thirty-six years, was sent to the Women's Hospital by Dr. Streeter, of Watertown, to have oöphorectomy performed for the relief of symptoms due to a large multilocular fibroid tumor of the uterus. She had been suffering from menorrhagia and dysmenorrhœa for years, and had been unable to obtain relief. The tumor was as large as a fetus at the seventh month, lay principally on the right side of the abdominal cavity, and extended as high up as the umbilicus. The uterus could not have been extirpated without imminent danger to

life.  
treat  
sult  
Heg  
Pag  
and  
ably  
boun  
to re  
how  
This  
the  
Dr.  
were  
the o  
of Ob  
and  
occu  
ing m  
great  
had b  
shoul  
quent

An E  
Dr.  
Medic  
ing no  
theria  
traced  
tion of  
vious e  
tained  
the inq  
after th  
arrive  
howeve  
teen pe  
disease  
what F  
the pat  
vender,  
compara  
dairyme  
veyor o  
water de  
amount  
the Chu  
an open  
slightly  
used by  
den Par  
the taint  
illies had  
thrown  
before th  
"it look  
houses in  
gether es

Comp  
From t  
we learn  
cated to  
experim  
in one ki  
The auth  
basing his  
increase i

life. After an unsuccessful trial of medicinal treatment for a month, it was decided at a consultation of the surgeons of the hospital, that Hegar's operation should be performed. The President removed the Fallopian tube on one side and both ovaries. The case was progressing favorably since the operation. The right ovary was bound down by adhesions, and extremely difficult to remove. Where adhesions were not present, however, the operation was not a difficult one. This was the third time it had been resorted to at the Woman's Hospital within a month—twice by Dr. Thomas, and once by himself. The patients were doing well. According to the statistics of the operation, as given in the "American Journal of Obstetrics," January, 1880, out of one hundred and twenty cases only twenty-eight deaths had occurred. The success of the operation in relieving menorrhagia and dysmenorrhœa had been so great, and the dangers attending its performance had been so small, that the President thought it should be resorted to in these cases more frequently than had been done in the past.

#### An Epidemic of Diphtheria from Infected Milk.

Dr. Morrell Mackenzie has favored the *British Medical Journal*, January 20, 1883, with the following note of a severe but limited epidemic of diphtheria recently raging at Hendon, which has been traced by himself and Dr. Cameron to the infection of the milk supply. Although in some previous epidemics a strong suspicion has been entertained that milk was the vehicle of the poison, the inquiries have generally been made so long after the occurrence that it has been difficult to arrive at any certain result. In this instance, however, the facts appear to be conclusive. Fifteen persons were attacked on a single day, the disease in every case being a typical example of what French writers call *diphthérie d'emblée*. All the patients received their milk from the same vendor, and no other case occurred among the comparatively large population supplied by other dairymen. It has been discovered that the purveyor of the tainted milk, washed his cans in water derived from a brook which contains a large amount of sewage matter. Indeed, the whole of the Church End district of Hendon is drained by an open ditch into the Brent, and this ditch passes slightly above and in close proximity to the brook used by the dairyman in question. In the Tenterden Park district, every household made use of the tainted milk except two. One of these families had cows of their own, and the other had thrown away the milk supplied to them the day before the outbreak began, because it was thought "it looked bad." These two were the only houses in the Tenterden Park district which altogether escaped infection.

#### Compensatory Hypertrophy of the Kidney.

From the *British Med. Jour.*, January 13, 1883, we learn that Prof. Golgi has recently communicated to the Lombardy Institute the results of his experiments on this subject, showing the changes in one kidney when the other has been removed. The author points out that Valentin, in 1839, basing his opinion on experiments, held that the increase in size and weight of the organ was due

only to the increase of its contents through dilatation of the blood-vessels and the canaliculi. In 1871, Rosenstein supported almost the same view, attributing only a trivial portion of the augmentation to increase of the epithelium, or of the interstitial tissue. Of recent authors, Ribbert held, but without proving it, that proliferation of the epithelium accompanies the dilatation of the canaliculi. Tizzoni and Pisenti, on the other hand, asserted that the epithelium of the tubules was altogether passive. These last authors, however, had overlooked the only criterion by which it was possible to say whether the cells were passive or not, namely, the series of changes they undergo in multiplying. Taking these changes as his guide, Professor Golgi found that the increase of a kidney after the removal of its fellow should be ascribed, at least in part, to a development of the pre-existing glandular tissue. Whether new canaliculi are formed, he does not as yet feel authorized to say; and on this point he thinks further researches are desirable.

## REVIEWS AND BOOK NOTICES.

### NOTES ON CURRENT MEDICAL LITERATURE.

—An edifying and unique contribution to medical literature comes to us in the form of a reprint from the *American Journal of the Medical Sciences*. Dr. John L. Atlee, of Lancaster, contributes a valuable article on a case of Strangulated Hernia, complicated by a very extraordinary diseased spermatic cord; his son, Walter F., a case of ovariectomy, in which the expanded bladder was wounded, with recovery; and his grandson, Louis W., a case of Congenital Cyst of the Back of the Head, with serous contents, its cavity unconnected with that of the skull.

—An excellent and forcible article in favor of cremation is the address on "The Disposal of the Dead," read before the American Public Health Association, by Dr. W. H. Curtis, of Chicago, which we receive as a reprint from the Public Health Papers of the Association.

—The Board of Trustees appointed at the last annual meeting of the American Medical Association, charged with the duty of agreeing upon the plan of a weekly medical journal to take the place of the annual volume of Transactions, and to ascertain how far pledges for its pecuniary support could be obtained from the profession, held a regular meeting at Chicago, on the 17th day of January, 1883. They reported that they believed the proposed plan could be carried out.

—The contents of *Lippincott's Magazine* for March are unusually varied, and include several articles of special interest. Professor James D.

Butler has an apparently exhaustive paper on the "Portraits of Columbus." "Invalid Life in the South" sums up the experiences of five years spent in the recovery of health, and contains much information and many suggestions that cannot fail to be useful to those who are in search of a genial climate and other favorable conditions with the like object.

—In a reprint on the medical relations of the various forms of food adulteration in vogue in this country, Dr. Henry Leffman, of this city, who is a competent chemist, makes the comforting assurance:

I cannot let this opportunity pass without stating my convictions that at present no urgent necessity exists for specific legislation in reference to food adulteration. I do not agree with the view that extensive disease is caused by the practice; and even if such effect did occur, I feel certain that, under the principles of common law, ample protection to the community exists, as soon as the attention of the prosecuting officers is directed to the matter.

—The "Proceedings of the Naval Medical Society," Vol. I., No. 1, makes a neat pamphlet of 32 pages. It is taken up with papers on "Etiology and its relation to Line of Duty," matters of purely technical interest. The following are the officers of this Society at present: President, Albert L. Gihon, M. D.; Vice-President, John M. Browne, M. D.; Secretary, James M. Flint, M. D.; Business Committee, Thomas J. Turner, M. D., Adolph A. Hoehling, M. D., Thomas H. Streets, M. D.

—A broadside "Consultation Chart" of the eye symptoms and eye complications in general diseases has been prepared by Dr. Henry G. Comwell, of Columbus, Ohio. It appears to be full and accurate, and is well worth the practitioner's attention.

—To the literature of tuberculosis we add the following titles: "Tuberculosis as Manifested in the Larynx," a report of a number of instructive cases by Dr. J. Solis-Cohen, of this city; and "A Simple Solution of the Mystery of Tubercles," by Dr. Rollin R. Gregg, of Buffalo, N. Y., whose peculiar views we have previously referred to.

—Dr. Douglas Graham has republished through J. H. Vail & Co., New York city, a popular description of Massage and its uses, originally written for the *Popular Science Monthly*. It is a succinct and accurate essay on the subject.

—A pamphlet of interest to botanists is one entitled "The New Botany," a lecture on the best method of teaching the science, by W. J. Beal, M. Sc., Ph. D., Professor of Botany in

Michigan Agricultural College, Lansing, Mich. Second edition, revised by the author, price 25 cents. Published by Chas. H. Marot, 814 Chestnut street, Philadelphia.

#### BOOK NOTICES.

**Sanitary and Statistical Report of the Surgeon-General of the Navy for the year 1880,** Washington, 1882. 8vo. pp. 469.

It is rather late to receive a report for 1880, but better late than never. Moreover, it is a very good report—the best we have ever seen from that Bureau—and this makes amends. The opportunities for observation of the navy surgeons are unusual, and they make intelligent use of them. The volume is full of sanitary notices and local studies, which give pleasant reading to all who take an interest in medicine as a broad science. It deserves a place on the shelf of many who have never been to sea, and never expect to go.

**A Practical Treatise on Diseases of the Skin.** By James Nevin Hyde, A. M., M. D., etc. H. C. Lea's Son & Co., Cloth, 8vo., pp. 571.

The author presents here a work which does credit to his study of the subject, but we cannot say that we have found in its pages much or any fruit of original research. It impresses us as a compilation—a fair and judicious compilation—but not meriting a higher praise. We do not see that any particularly new light is thrown upon any of the vexed questions in dermatology, nor is the therapeutics of the branch enlarged by any discoveries.

To those who would like a compact treatise presenting what is known in this specialty, we can recommend the one before us; but the student of the branch who is already familiar with its literature will scarcely find it to repay him to read Dr. Hyde's book.

**An Essay on the Breeding and Management of Draught Horses.** By Richard S. Reynolds, M. R. C. V. S. London: Billiere, Tindall & Cox. 1 vol., Cloth, 8vo., pp. 104. Price, \$1.25.

We have here one of those able monographs in veterinary science which show how much more thoroughly that department is studied in England than in this country. It is an excellent physiological treatise on the methods of improving the particular breed of horses under discussion, and though written for the latitude of Great Britain, the American reader can glean from it many valuable hints. For sale at the office of the MEDICAL AND SURGICAL REPORTER.

D. C.  
JOS

Th  
this of  
Med.  
Quart  
Repor  
Physi  
Repor  
Repor  
For  
Mar  
of chan  
All  
postal

QUA

With  
MEDICAL  
has been  
the 1st o  
It is e  
REPORTER  
pear in o  
The pr  
\$2.50 per  
subscriber  
dram also,  
low price  
when paid  
office.



THE  
Medical and Surgical Reporter,  
A WEEKLY JOURNAL,  
ISSUED EVERY SATURDAY.

D. G. BRINTON, M. D.,  
JOSEPH F. EDWARDS, M. D., } EDITORS.

*The terms of subscription to the serial publications of this office are as follows, payable in advance:—*

Med. and Surg. Reporter (weekly), a year,	\$5.00
Quarterly Compendium of Med. Science, - - -	2.50
Reporter and Compendium, - - - -	6.00
Physician's Daily Pocket Record, - - -	1.50
Reporter and Pocket Record, - - - -	6.25
Reporter, Comp. and Pocket Record, - - -	7.00

*For advertising terms address the office.*

*Marriages, Deaths, and Personals are inserted free of charge.*

*All letters should be addressed, and all checks and postal orders drawn to order of*

D. G. BRINTON, M. D.,  
115 South Seventh Street,  
PHILADELPHIA, PA.

THE  
QUARTERLY COMPENDIUM  
OF  
MEDICAL SCIENCE.

With January 1st, 1883, the COMPENDIUM OF MEDICAL SCIENCE, formerly published half yearly, has been commenced as a *quarterly*, to be issued on the 1st of January, April, July, and October.

It is especially adapted to be taken with the REPORTER, as few or none of the articles in it appear in our weekly journal.

The price of subscription remains the same, \$2.50 per year. But as a special inducement to subscribers to the REPORTER to take the COMPENDIUM also, we offer the two journals at the very low price of

SIX DOLLARS,

when paid for *strictly in advance* and directly to this office.

THE WEIR-MITCHELL TREATMENT.

Every physician who knows anything at all, knows very well that Dr. S. Weir-Mitchell, of this city, has established upon a rational foundation his method of treatment of certain nervous disorders, by means of forced feeding and forced utilization of the food so ingested.

Dr. Playfair, of London, has been using the same methods now for some eighteen months, and his successes fully coincide with Dr. Mitchell's.

The case best suited for systematic Weir-Mitchell treatment is the worn and wasted, often bedridden woman, who has broken down, either from some sudden shock, such as grief, or money losses, or excessive mental or bodily strain, beginning with simple debility more and more yielded to, until at last all power of effort is lost. Coincident with this is the total loss of appetite, the profound anæmia, and the consequent wasting of the tissues.

Then follow the graver forms of hysterical disease, such as paresis, or paralysis, vomiting, disorder of motion, hystero-epilepsy, and many others, which constitute the despair of the physician.

The principal elements in the systematic management of these cases are:

1. The removal of the patient from unhealthy home influences, and the placing her at absolute rest.

2. The production of muscular waste, and the consequent possibility of assimilating food, by what have been called "mechanical tonics," viz., prolonged movement and massage of the muscles by a trained shampooer, and muscular contractions produced by electricity.

3. Supplying the waste so produced by regular and excessive feeding, so that the whole system, and the nervous system in particular, shall be nourished in spite of the patient.

Since one of the chief elements in this treatment is the removal of the patient to a hospital, thus isolating her from the morbid influence of well-meaning but injurious commiseration of anxious friends and relatives, it is evident that its application is restricted to cities, and cannot be

well carried out in country districts, where no such homes or hospitals exist.

The experience of these two eminent gentlemen is highly satisfactory, and it behooves us all to give great heed to these evidently valuable therapeutic measures.

#### THE ELECTRIC LIGHT IN SURGERY.

It would seem that we are on the eve of an exceedingly important development of the practical application of the electric light to aid the surgeon in many of his dark and narrow ways. More than a year ago, Sir Henry Thompson explored the bladder by means of the electric light; and now Leitz, of Vienna, is devising instruments for illuminating the throat, posterior nares, bladder, uterus, etc.

The aid that this light will afford us in detecting diseased conditions of these obscure cavities is simply incalculable. It will bring their hidden recesses as clearly and distinctly to our view as is now the external surface of the body. Dr. Thomas Oliver has recently demonstrated afresh the practicability of this use of electricity. He says:

"Having at the present time a patient in the infirmary who is suffering from hydatid disease of the liver, on whom the operation of abdominal section with incision of the liver had been performed, giving exit to about seven pints and a half of pus—I took advantage of the opportunity, and succeeded in lighting up the interior of the cyst by means of the electric light. For this purpose Mr. Payne devised and constructed a brass tube, electro-plated, nine and a half inches in length, and eleven-sixteenths of an inch in diameter externally. One end of this tube was funnel-shaped, and the other was closed by a piece of glass; down this tube was inserted a narrow cylinder, which carried a Swan's lamp and the electric wires. This tube, with its glazed extremity, was smeared with carbolized-oil, although, in future, I shall use carbolized glycerine for the window of the tube, and, with gentle pressure, I succeeded in passing it through the abdominal incision into the interior of the liver. The lamp was at once lit, and I had the pleasure of observing a grayish-red condition of the wall of the cyst, studded across which were numerous yellow-white spots, evidently pus; a slight oozing, or sweating, was also noticed on the wall of the cavity. The illumination of the interior of the liver by means of the electric light was in every way satisfactory and successful; and, although it is of little aid in the treatment of the case in question, it has shown us that the lighting up of internal cavities is not only a possibility, but a

matter of comparative ease. With the extremely small size of the Swan's lamp required (it is not much larger than an ordinary bean), and which gives a light equivalent to that from three candles, and with the improved instruments which Mr. Payne is devising, I see how the electric light might become useful in operations for vesico-vaginal, or recto-vaginal, fistula, and in certain diseases of the bladder."

#### BILLROTH ON EMPYEMA.

Billroth's views on this subject are justly entitled to attentive consideration. He does not believe that either tuberculosis or caries of the rib are common sequences of empyema, but rather inclines to the view that death is more common from other accidents and from lardaceous degenerations.

He does not believe that the results of operations for this disease are any more favorable since than before the introduction of Listerism. Fifteen cases treated in his clinic since 1876, by free openings and various forms of antiseptic dressings, terminated as follows: Of three (empyema associated with tubercular disease), two died and the third was lost sight of. Of ten (the result of simple pleurisy), three died, one did well for a time, but died within a year; four did well for some months, but were then lost sight of; in three, while there was some improvement, the fistulas remained open and discharging two years after the operation. Of the last two (of traumatic origin), one recovered apparently completely in nine months; the latter improved, but was not healed after eighteen months.

Of fifteen cases operated on by Weinlechner & Billroth, in only two was a definite and permanent cure effected. The *Medical Times and Gazette*, January 27, 1883, from which we learn these facts, concludes that the statement of opinion by Billroth, that antiseptic treatment of the discharging empyema is without influence in the prevention of septic serous inflammations, is worthy of all attention, as proceeding from him; but we have seen isolated cases of enormous empyema in children, even when offensive to the nostril, do remarkably well with proper antiseptic dressings. We are glad that Dr. Fraenkel has put this series

of cases on record, and we hope that his excellent example will be followed both at home and abroad. More information and statistics on the results of cases treated with Listerism are greatly to be desired.

#### THE PREVENTION OF HYDROPHOBIA.

In 1862 Bourrel suggested that when the permanent teeth of a dog are well grown, the incisors and canine teeth can be blunted so as to render it impossible for a dog to inflict wounds on men or animals which might lead to inoculation with the virus of rabies. At the time, his suggestion was much ridiculed, one journal suggesting that all dogs should be provided with false teeth. The question has been revived in the *Medical Press and Circular*, January 17, 1883, by "a member of the Sanitary Institute of Great Britain."

"In general," says M. Bourrel, "it is a sharp pinching produced by the front teeth that causes inoculation; the skin is torn, or the bite draws blood. By blunting, or resection, sixteen obtuse surfaces are substituted for sixteen sharp points. Sporting dogs in the habit of tearing the game have been prevented from doing so by this measure, while the furious disposition of some dogs, such as watch-dogs, which render them dangerous to every one, was softened, and brutes which would have to be destroyed were consequently allowed to live. Terriers have not ceased to kill rats after this blunting; they have only lost their power to kill cats, which is a happy result. The same operation disarms those bull-dogs that certain individuals have the discreditable passion of exciting to fight; pet dogs have been operated upon without any inconvenience."

The suggestion seems to us a very practical one, and we heartily commend it.

It is too much to hope that legislation could compel compliance with it, but we give it publicity in this country, in the hope that owners of dogs will voluntarily resort to it, especially since it is expressly stated that it does not injure the animal.

The argument of "cruelty to animals" cannot be validly urged against it, since it is much less repellent than the clipping of the ears or tail, so commonly resorted to.

Hydrophobia is such a terrible disease when contracted, that so simple and commonplace a precaution ought not to be neglected; but its universal application will require the co-operation of the people.

#### FRENCH AND GERMAN SCIENTISTS.

One of the benefits to science of the animosities created by the Franco-Prussian war has been but lately made manifest. At the late International Congress of Hygiene, at Geneva, M. Pasteur, the celebrated French scientist, made an attack on Koch, the distinguished German investigator.

The latter, owing to want of familiarity with the language, postponed his reply, which he has now made in a pamphlet published at Berlin. He claims for himself the discovery of the cause of splenic fever (Pasteur's great stronghold), because he showed the development of anthrax spores and their relation to the disease in 1876, while Pasteur did not publish his discoveries until 1877. He denies the high value of preventive inoculation, in such diseases as fowl cholera and anthrax, claimed by Pasteur.

So on, throughout the pamphlet, he takes occasion to belittle and doubt the conclusions of the Frenchman.

This paper will naturally irritate the excitable French blood, and the gauntlet having been thrown down, the thinking world will no doubt be afforded much food for reflection ere the termination of this scientific duel between the illustrious and sanguine Frenchman and the distinguished and phlegmatic German.

So goes the world, and it is well that it does, for by these very conflicts of valuable opinions we are saved from accepting as settled facts the teachings of any one, until they have been tested and thoroughly criticised. It was said just after the close of the war that the feeling created by it would redound to the benefit of science, and it would seem as though the prediction were to be verified.

#### SANITARY LECTURES.

The Chicago Medical College is giving its students an extended course of lectures on State medicine, which embrace information concerning the introduction, spread, and restriction of small-pox; vaccination, and the propagation of vaccine virus; the prevention of epidemic and pestilential diseases; and sanitary living as applied to

the individual. This last comprises the location and construction of a house; the effect of ground-air and ground-moisture upon health, and the consequent necessity for thorough soil drainage; house drains, their defects, how to discover and remedy them; ventilation, heating, and personal habits.

This is the first college in the country to make "hygiene" a part of the regular curriculum. When will the authorities of our medical colleges, in this, the *alma mater* of American medicine, commence to appreciate the importance of sanitary science, and place its teaching side by side with physiology and anatomy?

## NOTES AND COMMENTS.

### A Case of Causalgia.

A woman sustained a fracture of the lower ends of the bones of the legs. After a perfect union, there was slight stiffness of the muscles on posterior surface of the leg. Some weeks later she began to experience an uncomfortable burning sensation in the sole of the foot after walking, which gradually increased in severity until it assumed a very painful character. When Dr. Charles T. Poore, who reports the case in the *New York Med. Jour.*, February 3, 1883, saw her, she described the pain as follows: After walking a short distance, or letting her foot hang down with a boot on, the sole of the foot, at a point corresponding to the metatarso-phalangeal joints and a little behind them, began to burn; soon the skin became very sensitive, red, swollen, and the pain excruciating, so that she had to remove her boot; she had noticed that at times the skin had a glazed appearance. During the paroxysm the pain extended up on to the side of the foot, and then to the leg. When the pain was intense, she obtained relief by placing the foot in as hot water as could be borne. She had no pain when the foot was raised, even if she had a boot on. After an attack, the pain gradually diminished, and in an hour or so it disappeared. Electricity and iodine locally were useless. A Paquelin's cautery raised to a white heat was applied to the painful point on May 17th. The patient complained of but slight pain from the application, and was out in the afternoon. From this date until the 1st of June the foot was cauterized five times, with an almost entire relief from pain. She is now free from all

trouble, and goes about as well as ever. This disturbance in circulation was probably due to a traumatism of the posterior tibial nerve.

### Pulsation of Spleen in Aortic Incompetence.

The *Medical Times and Gazette* says, it would appear that this sign of aortic incompetence has not been previously described. Attention has now been drawn to it by Dr. Gerhardt, in the *Zeits. für klin. Med.*, IV., S. 449, without any attempt being made to magnify the importance of the phenomenon. We are familiar with pulsation in the smallest vessels of many of the visible parts of the body in aortic incompetence, including the bed of the nails; and Quincke has shown how the two factors necessary for its production are, relaxation of the vascular walls, and sudden great variation in the blood-pressure, such as occurs in aortic regurgitation. In Gerhardt's three cases the spleen was large and the patients in high fever. The splenic tumor swelled during cardiac systole, expanding gradually, and diminished in size again during diastole. A dull double sound was audible over the tumor, apparently distinct from the cardiac murmurs, which could be made out at the upper part of the tumor. To the finger the pulsation had not the characters of an aneurism, but was of the nature of a soft swelling, very much as in pulsating jugulars. The sign appears to be not entirely without some prognostic value, inasmuch as it indicates a sound condition of the left ventricular walls, and compensation, as far as possible, of the valvular inadequacy.

### Intestinal Obstruction Treated by Rectal Tube.

Dr. J. Foster Bush reports (*Boston Medical and Surgical Journal*, February 1, 1883), three cases of intestinal obstruction, all of which came on after indulgence in improper food, and were relieved by injections through a rectal tube. The tube was introduced for a length of twenty inches, and injections of water were made once and sometimes twice daily through it, but a second was never given till the patient had recovered from the bad effects of the first.

In the first case mentioned the only time the injections were suspended for any length of time was when pain and intestinal spasm had been created; and whenever this is done, or whenever we have fear that the intestinal structures have been weakened by inflammation or ulceration, of course the injections would be contra-indicated.

Distention from below is not a new method, and other means than fluids have been employed. Air, for instance, has been forced in by means of



a pump or bellows, or by chemical action, as by the injection of an alkaline followed by an acid solution. These last have only to be mentioned to be discarded, for they have not the soothing or relaxing properties of the water, which also exerts a force directly proportionate to the bulk employed, by reason of its compressibility and by its being regulated at will.

#### Blennorrhagic Pleurisy.

Several years ago Dr. Sée observed a case of gonorrhœal rheumatism, complicated by pleurisy. To his mind the pleurisy was evidently due to the venereal disease, since the two inflammations, arthritic and pleuritic, commenced at the same time and without any previous exposure on the part of the patient. Quite recently he saw another instance of this rare complication of gonorrhœa (*Journal de Médecine*, December, 1882). This was the case of a young man, twenty-five years of age, who had contracted a gonorrhœa some three months previously. He was suddenly taken with chills, followed by pains in his side, fever, and dyspnœa. Pressure upon the sides of the thorax induced the most acute pain. Upon his admission into the hospital, he showed evident signs of pleuritic effusion with extreme dyspnœa. He was not benefited by hypodermics of morphia. A hypodermic of nitrate of pilocarpine, however, gave an excellent result. Dr. Sée insists that the thoracic pain, and the general, instead of the local disorder, is sufficient to establish a diagnosis of true gonorrhœal pleurisy.

#### Digestion of Meat.

Dr. P. Hönigsberg has made a number of experiments to determine the digestibility of meat. His results, which seem to be reliable, contradict somewhat our views hitherto held in regard to this subject (*Wiener Med. Blätter*, 1882, 19 and 20). Raw, cooked and fried meat was digested artificially with gastric juice, prepared out of five grammes pepsin dissolved in 1,000 ccbtm. acidulated water (1 p. c. hydrochloric acid). Syntonin was removed by neutralization, albumen by boiling, and hemi-albuminose by treatment with acetate of iron. The solution was decomposed with phosphor-wolfram acid, the nitrogen determined in the precipitate and pepton calculated. It was found that fried meat is most perfectly digested, raw less, and boiled still less.

#### Ergotine Suppositories.

M. Liebrecht, of Liège, has found that ergotine administered in this way is very rapidly absorbed,

its action is energetic, and it provokes no pain. With smaller doses than are usually employed in hypodermic injections, equal or even superior effects are obtained.

The following formula is serviceable:

R. Dialyzed ergotine,	1½ grams
Ol. theobromæ,	1½ grams
Vaselinæ,	½ gram, M.

For one suppository; three may be applied weekly. The uterine affections, in which injections and suppositories of ergotine are of benefit, are: Fibroids, menorrhagia, metrorrhagia after labor, at the period of the change of life, or when tumors are present; finally in chronic metritis and endometritis. For hypodermic injection, M. Liebrecht uses exclusively pure dialyzed ergotine.

#### The Stomach of an Idiot.

The *British Medical Journal* says that from the stomach of an idiotic girl, aged 10, who died recently, there was removed a mass of vegetable fibres, (straw, twigs, fragments of matting, thread, etc.,) so interwoven and moulded as to make a cast of the stomach and duodenum. The stomach was 18 inches in length, and weighed 31 ounces. The case is interesting as showing how, in an individual of low nervous organization, obstruction of the stomach, by a gradually increasing mass, might for a long time be tolerated without any obvious symptoms of irritation. What next?

#### Tetanus in Typhoid Fever.

Dr. Morris Fussell, in the *Medical Times* for January 13, 1883, relates briefly two very interesting cases of tetanus complicating typhoid fever during the stage of convalescence, one of which terminated fatally. He failed to find any idiopathic cause for these occurrences, and suggests that they were probably traumatic in origin, the traumatism having been inflicted by the nozzle of a rectal syringe, by possibly abrading slightly the mucous membrane on the surface of a hemorrhoid.

#### Treatment of Gonorrhœa.

A rather large number of American, German, French, and English physicians have—as we see by reading through the many different foreign and domestic medical journals—of late been reporting very successful results in the treatment of gonorrhœa by the *yellow* oleum santali. We learn that the remedy invariably puts an end to the discharge within two days, but to prevent a relapse it has to be continued for two weeks longer. From 15 to 20 drops given three times daily is the usual dose, which may be administered on sugar or in gelatine capsules.

### Infantile Ascites.

Professor Simpson exhibited to the Obstetrical Society of Edinburgh (*Medical Press*, January 17, 1883,) a case of a child which died immediately after birth from ascites of the peritoneum. There was fluid in the scrotum, showing a direct connection with the peritoneum.

## SPECIAL REPORT.

### REPORT OF PROGRESS OF OTOTOLOGY, NO. 2.

#### Diseases of the Ear in Children.

(Continued from p. 222.)

*Earaches* in children are well-known to be often extremely severe and continuous, and it is not wonderful that the cries of the child, produced by them, should be loud and bitter, and that it should continue with slight intermission for hours till the little patient is completely prostrated and hoarse. How natural it is that with the exceedingly impressionable brain and spinal cord of a child, all these "nervous" symptoms produced by an exudative inflammation of the middle ear should be much more marked, and that in a child the confounding of the ear disease with a meningitis should really be very easy. The symptoms of the ear disease, such as great increase in the pulse and temperature, with frequent vomiting, constant stupor bordering on complete loss of consciousness, irrational talk and screaming, great restlessness with an anxious opening of the eyes, before which objects move, and the conditions of irritability increasing to twitching of the facial muscles and to convulsions of the limbs, all tend to lead one to expect rather an internal affection than an ear disease. Many years ago, Schwarz, of Fulda, so expressed himself in a decided manner, and Ludw. Meissner wrote, "The inflammation of the ear is certainly one of those diseases which is most frequently overlooked in young children, as they are unable to define the seat, the kind, and the severity of the pain." Most commonly it is mistaken for inflammation of the brain. Helfft compared the symptoms of inflammation of the inner ear in young children to those of genuine meningitis. Hauner expressed himself later in a similar way. Streckeisen in his "Bericht über den Kinderspital in Basel, 1864," says, "In the pneumonia of infants, convulsive symptoms showed themselves usually in the last three days (of life), and the explanation of these was found on dissection to be purulent inflammation of the tympanum and its meningitic connec-

tions. The most valuable contribution is that of Steiner. As it concerns older children, he expresses the opinion that the chief cause of brain symptoms in the so-called cerebral pneumonia is a simultaneous purulent inflammation of the ears, as he observed in sixteen children, aged from five to ten years, that with pneumonia of the apex, the brain symptoms (a comatose delirium) disappeared as by magic on the appearance of a discharge from the ear. As the chief symptoms, which continue in variable intensity till the appearance of the otorrhea, Steiner enumerated "vomiting, somnolence, alternating with great restlessness, delirium, expressions of pain in the head, a dulled intellect, or complete loss of consciousness."

A distinguished American physician, the late Edward H. Clark, Professor of Materia Medica of Harvard University, Boston, published twenty years ago: "So important is a proper attention to the ears during and after the disease just referred to (exanthemata), that the physician who treats such cases and neglects to give this attention, cannot be said to perform his duty to his patient." See also paper on the same subject by D. L. Turnbull, Ohio.

In regard to the cause and prognosis of an acute otitis media, the great width of the Eustachian tube in children must be regarded as a very favorable circumstance. "In older children or in the intense forms of acute inflammation of the middle ear, the disease, as during scarlet fever with diphtheritis of the nose and pharynx, an early paracentesis of the drum-membrane is, without doubt, the best treatment; with good illumination, the operation is very easy, and can be performed with any long cataract or corneal paracentesis needle; if it is to be done on the posterior half of the drum-membrane, which lies most exposed, it should be remembered that this portion is sharply inclined, its lower part lying deeper and consequently farther from the operator than its upper part. After the operation, the pus should be evacuated as thoroughly as possible by Politzer's inflation, and the fluid absorbed by a pellet of absorbent, not syringed out of the meatus with warm water, or injections of one per cent. salt or soda solution.

With this disease, the affection of the nasal and pharyngeal mucous membrane should always be treated. It is more convenient and thorough to use the nasal douche of Theodore Weber, but with great care.

Never use plain water, but if nothing special is ordered, either a solution of salt or milk and

water. Always have the water lukewarm (77°-90° F.) Never have the reservoir higher above the nostril than  $1\frac{1}{2}$  feet. Avoid swallowing, and breathe quietly through the mouth during the operation, and, with children, occasionally interrupt the current. Direct the stream backwards, never upwards. The atomizer for the nasopharynx is especially used for this purpose. If the mucus is viscid, and apt to form crusts, a solution of soda should be used; if decomposition of the secretions of the nose has taken place, a disinfectant, with potassii permanganate or with salicylic acid, added to a borax solution.

In regard to chronic aural catarrh, when children have reached the age of one or one and a half years, and utter no sounds such as ma-ma, pa-pa, and do not even begin to affix words or sounds to the things with which they are daily surrounded, accurate observation should be instituted to learn how far the power of hearing exists. Every teacher will allow that deaf children are particularly prone to become fickle and visionary. As has already been said, in children a great variation in the hearing and in the other symptoms is noticeable.

What the fingers do by closing the nostrils in the physiological experiment, is accomplished in the catarrhal child by the swelling of the mucous membrane and the collection of mucus in the nasal cavity. Frequent insufflations of air into the nostrils by means of a rubber bag (the dry nasal douche of Lucæ) are in such cases of very great value.

In sub-acute cases, they often speak of a knocking or hammering in the ear. The meatus, as it does not take part in the pathological process, is normal. The drum-membrane, just before the rupture takes place, shows a loosening of its epidermal layer, which produces a perfectly opaque and whitish-gray appearance. After attacks of pain, extravasation can often be seen on the surface of the drum-membrane. The outer surface of the membrane is not otherwise altered, except that some of the blood vessels which run along the manubrium, or radiate towards the periphery, become visible. This radiating injection occurs when there is a large collection of secretion in the tympanum, and makes itself apparent sometimes by very marked changes upon the surface of the drum-membrane, when grayish or yellowish vesicles or hernial sacs appear.

In children the membrane, even when the tympanum is filled with fluid secretions, is much less commonly bulged outwards in some of its parts. In a child, up to a certain age, the drum-mem-

brane is thicker and less transparent from the development of its surface layers.

During the course of catarrhal processes, there are produced various changes and irregularities in the color and the surface of the drum-membrane. Sometimes certain spots become opaque or otherwise discolored from circumscribed thickenings of the tissue.

To inspect the conditions of the tonsils, the mucous membrane, and the posterior walls of the pharynx, first depress the tongue with a spatula or finger. In the case of very small or intractable children, the opening of the mouth can be enforced by closing the nose. If the child can be persuaded to sound a loud "a," a better view can be obtained, from the raising of the palate which is thus produced. The inspection of the nasopharynx by rhinoscopy is only possible in exceptional cases in children under ten years of age, but a tactile examination is readily made with the finger, even by those whose fingers are short.

As we have already seen, the whole catarrhal process in the middle ear is, in the majority of cases, the result of the readily-occurring closure of the Eustachian tube, and we are justified in once more calling attention to the action of such a closure. We have already spoken of the very great advantages of the nasal douche. The inhalation of water, milk, or medicinal preparations from the hand is often necessary as a preparation for the nasal douche, but the same method is of undoubted value after washing out the nose, or in many cases, even without this latter procedure.

When there is a great deal of mucus, and the child does not understand how to blow the nose, air should be driven in forcibly from a syringe or from an air-bag, in order that a part of the obstructing secretion may be evacuated either into the pharynx or through the other nostril—a procedure that, in young children, is extremely useful as a preparation for the nasal douche.

In cases in which the nasal douche is, from any cause, contra-indicated, as, for instance, when one nostril is closed from malformation or granulations, or where it is desirable to apply medical solutions to the mucous membrane in small quantities or minutely divided, a finely perforated tube can be introduced for douching the pharynx, or an atomizing apparatus may be used; but if it is desired that the finely-divided fluid shall reach far backwards, an instrument must be used, the tip of which ought to be a tube long enough to reach the naso-pharynx, of flexible metal, so as to bend and accommodate itself to the irregular surfaces of the turbinated bones.

For some cases of chronic nasal and naso-pharyngeal catarrh, the use of sal-ammoniac vapor in statu nascenti is very beneficial.

Inflammation of the palatine tonsils often keeps up a chronic inflammation of the pharynx, just as a foreign body would, producing mechanical irritation and disturbances of circulation; they also interfere with the movements of the palate, and by pressing its posterior surface upwards against the tubal orifice, narrow or even close those passages.

In children and young persons the removal of hypertrophied tonsils improves the condition of the ears and of the hearing, often in a marked degree, and is always favorable to the chronic pharyngeal and nasal catarrh. In children of families where there is an hereditary tendency to catarrhal deafness, enlarged tonsils should be early removed as a prophylactic measure, even when the ears are intact. After the operation children breathe much deeper, and consequently the chest becomes more fully developed, the blood richer, and the child, previously pale and without appetite, improves in its whole constitution. If the enlarged tonsil is only soft, some improvement can be expected from iodine in gargles, and from frequent paintings with the same, long continued. (A paste of equal parts of caustic lime and caustic soda will be found very valuable in reducing this condition of the tonsils in children without an operation.)

Fahnstock's tonsillotome works admirably for children with whom it is impossible to use a knife; the larger tonsils should always be first removed. Ice is an excellent styptic and antiphlogistic. In regard to the local treatment of the ear necessary in chronic catarrh, the air douche is above all else the most important agent.

It will also be understood, from what has preceded, that paracentesis of the drum-membrane is very often desirable for the rapid evacuation of fluid secretion; the operation is, however, absolutely necessary when, in spite of repeated air douches, the fluid in the tympanum does not disappear, or the improvement from the inflation continues to be merely temporary.

The advice necessary for the hygiene of children suffering from chronic aural catarrh will be understood from what has already been said on the etiology of the disease. To the bad air to which children are frequently exposed, in their living and sleeping rooms, and school-rooms, the physician, in fulfilling his duty in preventing disease, should have a watchful eye. The ear may be affected by pathological conditions of the body,

and especially of the circulatory system. Of course our therapeutic measures must often be directed to such general diseases.

*Diseases of the Mastoid Region.*—After incising a subperiosteal abscess, the bone may be found softened, roughened, or even with a fistula through it, and the best course then, is to remove the diseased spot immediately.

The cortical substance of the petrous bone is so thin in small children that a strong pressure with the knife is often sufficient to open the cavity; but it is much better to make a large opening into the antrum mastoideum by means of a sharp spoon, a gouge, or Luër's gouge-forceps. Of the 44 operations by Schwartze, 16 were in patients less than 15 years old.

Extensive necrosis of the petrous bone occurs rarely when we remember the frequency of the suppurations of the ear.

#### Diseases of the Inner Ear or Labyrinth.

The view that the nutrition and blood-currents of the membranous labyrinth is principally influenced by intercranial process, corresponds with the anatomical experience of Schwartze.

The disease cerebro-spinal meningitis finds most of its victims among children, and is the cause of innumerable cases of deaf-mutism. Unfortunately we have but few accurate reports of the appearances of the ear in such cases of deafness produced by cerebro-spinal meningitis.

And a still greater difficulty is presented in the differential diagnosis between acute meningitis and other intracranial processes on the one hand, and purulent processes within the labyrinth on the other hand, as a very rapid diminution or complete loss of hearing power is common in both varieties, and a large number of similar appearances are found in each.

Comparing the characteristics of the disease in question with the well-recognized symptoms of meningitis cerebro-spinalis epidemics resulting in deafness, the very great resemblance will be recognized by every unprejudiced mind.

Let us now return to the consideration of those disturbances of hearing which, from the absence of changes in the peripheral parts of the ear, or from reasons of probability, we regard as the results of anomalies in the nervous apparatus. Such anomalies may be frequently the reason why children, and especially those who are unusually slow in their development in all particulars, only begin to talk very late and make such slow progress in their speech. Not uncommonly parents and physicians think of the hearing only after a long time, and then the most superficial tests im-



mediately show it to be very much impaired. If the ear is carefully examined by an expert, the presence of changes in the tympanum, which may have been produced in early life, or which may be even congenital, cannot be denied with certainty; but there are cases where a congenital defect and arrest of development in the nervous or central apparatus may be diagnosed with the greatest probability.

Such are cases where the formation of the skull is peculiar, the intellectual development and power of walking are less than natural, and especially those where congenital anomalies and affections referable to the central nervous system, such as idiocy, epilepsy, deaf-mutism, exist in the family, particularly in the other children. In some of these families old syphilis is an important element, as it is very apt to be in cases of total or very extreme deafness. It should by no means be understood, however, that in the majority of these cases anything is to be gained by specific medication. More commonly the indication rather is to try the treatment for chronic tympanic catarrh, as already given, if any reason is found for it in the condition of the ear, nose, and pharynx, or in the gradual diminution of the hearing. More can be gained not infrequently in this way than was first expected. It may happen that, in addition to the congenital defect, catarrhal changes have occurred which still further reduce the hearing power, and, if an improvement or even the arrest of progress can be brought about in this, something has been gained. Only a properly-conducted treatment can, as a rule, show in how far the conditions in the tympanum are irremediable. The less the degree of hearing, and the more invariable it is, the less prospect is there of a result from such treatment.

In old nervous lesions any treatment is wholly useless; in recent ones it is advisable to try bleeding, derivatives, resorbents, and, later, electricity in one form or another, as sometimes the hearing power of itself improves up to a certain point, and an absolutely incurable process cannot be assumed at the very beginning.

*Deaf-Mutism.*—The same anatomical changes which at a later age simply cause total or great deafness, will, when they occur in the fetus or young child, interfere with the development of speech: or, if the child has already learned to talk, cause it to lose its speech. In either case the child is a deaf-mute.

Among the diseases which most commonly produce total deafness, and therefore deaf-mutism, are acute otitis in scarlet fever, especially when

associated with diphtheria and epidemic cerebro-spinal meningitis.

Care should be taken not to consider deaf-mutism as an isolated symptom, wanting in all variations of degree. If with children who are only extremely and not totally deaf, conversation through the ear-trumpet had been used early, and if they had been obliged to talk in the same way into their own ears, the learning of articulate speech would have been much easier for them; or in the case of a deafness acquired later in life, the distinctness of utterance would have been retained. If treated like an adult, and spoken to distinctly and slowly into the ear, or better, through an ear-trumpet, and at the same time if shown the object referred to, they can be gradually brought to perceive and understand what is said, will take an interest in using the hearing, and will very soon begin to imitate what is said and to speak. If the exercises in speech were further aided by obliging the child to talk often through the ear-trumpet into its own ear, in order that it may perceive its own voice, it would gradually gain control over this and over its pronunciation. Such a course of instruction, properly and consecutively followed out, would result in the child remaining simply hard of hearing, but possessing a tolerably distinct articulation; in other words, deaf-mutism would be prevented.

It is also very desirable to practice the child in reading words from the lips and repeating what is said. V. Trölltsch can recall several children with aural suppuration, who had already been placed in deaf-mute asylums or were regarded as hopelessly deaf-mutes, in whom deafness was so much reduced that individual instruction—and in one case even attendance at a public school—was sufficient to give them a very fair education and pronunciation. Institutes exist in which the instruction of very deaf children is being undertaken in the proper method, and it is no longer necessary to send them to deaf-mute schools when means do not allow of their being instructed alone.\*

In most of the cases of those who have already learned to talk, the loss of speech from deafness occurs in the fourth year, occasionally even up to the tenth year, and only in extremely rare cases up to the fourteenth year. Children who can already speak may lose this ability if they become deaf at any time up to the seventeenth year. Even in the eighth to the ninth year, the loss of hearing may make speech very imperfect.

\*See Turnbull on Imperfect Hearing and teaching deaf children at home and in public day schools. J. B. Lippincott & Co., Philadelphia, 1881.

The speech always lacks the euphony which is only attained and regulated when the person can hear his own voice; it is somewhat hoarse and monotonous, and characterized by the peculiarity that the single syllables are not run together, but sharply separated; the voice is as a rule, too loud, rough and irregular, without modulation, but this can be much improved by teaching them Bell's method of visible speech. The regular use of the voice counteracts the tendency to the development of the respiratory disease to which deaf-mutes are particularly liable. It is well established that an unusually large number of these unfortunates die of tuberculosis between their fifteenth and thirtieth years. Meissner (l. c., p. 130) gives a table of 61 deaths of pupils who were or had been in the Leipzig asylum. In 59, the cause of death was fully established; and 30 of these died of consumption of the lungs, 4 of inflammation of the chest, 1 each of pharyngeal phthisis, phthisis, and hydrothorax.

Finally, it should be stated that an immediately direct hereditary tendency to deaf-mutism is less common than a family tendency, even when both parents are deaf-mutes.

## NEWS AND MISCELLANY.

### Co-Education of the Sexes.

The *Boston Medical and Surgical Journal* says that an affair unfortunate for the advocates of "co-education" in medicine has recently occurred at Kingston, Canada, which seems to have been precipitated by the women themselves. It seems that there have been mixed medical classes, and recently the ladies took offense at a remark made by the professor of physiology, and left the theatre in a body. Thereupon the male students petitioned the Faculty to dismiss the ladies, and even went so far as to threaten to leave the school themselves if their request were not complied with. A compromise was agreed upon: the ladies now attending classes will be permitted to finish their course, but no more will be allowed to enter, and for the future the medical school will be for men only.

### Opium Smoking in the East.

Miss Bird, in her recent travels in the East, asserts from personal observation and inquiry that the use of opium no more frequently leads to the "opium habit" than the use of alcoholic beverages in England does to confirmed inebriety.

Another writer, in a recent issue of the *North China Herald*, maintains that the export of Indian opium to China is a great blessing to China, because it has been "steadily and certainly driving native opium out of the market, lessening its consumption, pushing the poppy farther and farther inland, and so has been wresting the land

from poppy cultivation and freeing an ever-increasing acreage for the growth of other crops. Indian opium, coming under the law of the 'survival of the fittest,' will force native opium to disappear, and with it the cultivation of the poppy, so that, instead of being an unmitigated curse, Indian opium is doing good work. It is the fierce antidote that kills the deadly poison; and, after having accomplished a double mission in India by supporting the introduction of Christian rule, and in China by freeing the soil from the incubus of a harmful growth, Indian opium will disappear before something nobler—will disappear before the moral regeneration of the millions of England and China."

### A New Pile Clamp.

This is the new pile clamp, invented by Dr. P. E. Skillern, of this city. It is a self-retaining instrument, with a good strong spring, that readily holds and compresses the pile during the operation. The instrument is seven inches in length, the blade being two and a half inches long and one-half inch in breadth, with the approximating surfaces slightly indented to prevent slipping. Pressure on the handle opens the blades, and when applied, and the pressure removed, the pile is tightly grasped and the circulation completely cut off. The simplicity of the instrument, together with its easy application and cost, are the points that recommend it. It is made by Mr. Lentz.



### Licenses to Practice in Illinois.

The Illinois State Board of Health has just given notice that after the current scholastic year license to practice medicine in Illinois will be granted to graduates of those schools only whose requirements include a preliminary examination on the essentials of a common school education. As but one medical school in the State conforms to this requirement, even on paper, at present, there is some stir in the various faculties as to ways and means for complying with the letter of the law.

### Preservation of Butter.

The *American Journal of Pharmacy* notes that Dr. W. Hagemann has observed in *Chem. Ztg.*, 1882, No. 67, that cow butter contains 0.5 to 0.6 per cent. of milk-sugar, which under the influence of bacteria is transformed into lactic acid, and this liberates from the glycerides the acid, containing less carbon. It is obvious from this that summer-butter becomes rancid more rapidly and strongly than winter-butter, and that for the preservation of butter two methods may be adopted, viz., either the lower fat acids are removed by soda solution, as proposed by Adolf Mayer and Dr. Clausnitzer, or else the milk-sugar must be removed, or its decomposition prevented by suppressing the vegetation of the bacteria.

**The Mortality of Large Cities.**

According to the latest official returns, the mortality per 1,000 inhabitants in the cities named has been as follows: Calcutta, 32; Bombay, 26; Madras, 33; Paris, 27; Geneva, 17; Brussels, 22; Amsterdam, 26; Rotterdam, 29; The Hague, 32; Copenhagen, 20; Stockholm, 32; Christiania, 17; St. Petersburg, 36; Berlin, 23; Hamburg, 24; Dresden, 29; Breslau, 26; Munich, 27; Vienna, 27; Prague, 28; Buda-Pesth, 24; Trieste, 29; Rome, 21; Turin, 26; Venice, 32; New York, 22; Brooklyn, 21; Philadelphia, 21; and Baltimore, 32.

**Brandy.**

From the report of the American Consul at Rochelle, we learn some startling facts concerning the adulteration of brandy. In most cases the spirits sent to England for consumption appear to consist of beet or potato spirit, diluted to the proper strength, and flavored with genuine cognac, and probably not unfrequently with the addition of other flavoring materials, so as to produce such a taste as would pass for ordinary brandy, and then bottled and labelled so as to sell at the prices of genuine brands.

**Sir James Paget's Toast.**

Sir James Paget, in proposing the toast, "Prosperity of the British Medical Association," at the recent Jubilee, uttered the following beautiful sentiment: "Do not let our disputes be very noisy on the scientific side. Remember always that it is only through clear and undisturbed water that you can see what lies at the bottom. In storms of controversy there is nothing to be found but the billow that moves to mischief and the foam that disappears."

**The Oil Palm.**

The fruit of the African oil palm (*Elais Guineensis*) has many applications, and it would seem it might have many more. The natives use it as an article of food. The oil is applied to the skin as an unguent, and to relieve slight inflammations. An excellent soap is made from it, well-suited to delicate skins. A Philadelphia merchant, Mr. Edward S. Morris, has taken much pains in collecting and refining the palm oil, and his products are acquiring much popularity.

**An English Tribute to Oliver Wendell Holmes.**

*London Punch* thus felicitously rhymes on the resignation of Dr. Holmes from the chair of anatomy in Harvard:

Your health, dear "Autocrit!" All England owns  
Your instrument's the lyre, and not "the Bones."  
Yet hear our wishes—trust us they're not cold ones!  
That, though you give up bones, you may make old ones.

**The Pennsylvania Board of Health Bill.**

Both the House and Senate bills to establish a Board of Health in this State have been killed for this session. We need not go into the reasons assigned for this discreditable fact. The effort was made to have the Board a mongrel one of eclectics, homeopaths, and such like "schools." This was

carried, and of course such a Board would probably be worse than none, so it was just as well that the bill was "indefinitely postponed."

**Officers for the Massachusetts Dental Society for 1883.**

*President*, Dr. F. Searle.

*First Vice-President*, Dr. A. B. Jewell.

*Second Vice-President*, Dr. D. M. Clapp.

*Secretary*, Dr. W. E. Page.

*Treasurer*, Dr. E. Page.

*Librarian*, Dr. R. R. Andrews.

*Executive Committee*, Drs. D. F. Whitten, F. E. Banfield, J. S. Hurlbut, J. F. Adams, Leon Rideout.

**Officers of the Medical Society of Tennessee for 1883.**

*President*, W. F. Glenn, M. D., Nashville.

*Vice President*, for Middle Tennessee: W. F. Clary, M. D., Unionville. For West Tennessee: E. Miles Willett, M. D., Memphis. For East Tennessee: G. A. Baxter, M. D., Chattanooga.

*Secretary*, C. C. Fite, M. D., Shelbyville.

*Treasurer*, R. Cheatham, M. D., Nashville.

**Medical Society of the State of Pennsylvania.**

The thirty-fourth annual session will commence at Norristown, Wednesday, May 9, 1883, at 10 a. m. All who desire to present papers at this session should send the title and time required for reading the same to Dr. J. O. Knipe, Chairman Committee on Programme, without delay.

W. B. ATKINSON, M. D., *Permanent Secretary*.

**Items.**

—A baby show, on the American plan, will be shortly held in Hamburg.

—The *Tiempo*, of Valencia, notes the birth of an infant with a beard and a full set of teeth.

—At Vienna and St. Petersburg, Physicians' Mutual Aid Societies have at length been organized.

—During the past year there were 300 persons killed and 1,000 injured in the anthracite coal mines.

—The newspapers say that Montreal exports to the United States about 150 subjects for dissection every winter.

—New York has just made the discovery that Central Park, from a carelessness about drainage, is a source of malaria and ill-health to the houses round about.

—The authorities at Berlin are discussing the propriety of prohibiting the importation of American pork, which is said to be largely infected with trichinae.

—A woman lay three days in a trance at Big Rapids, Mich. On recovering she believed that she had died and come to life as another person. This delusion cannot be dispelled, though in other respects she is sane.

—A Kentucky mule deliberately put its head through a crack in a post-and-rail fence, and stayed there until it choked itself to death. Such

instances of suicide are not rare among horses and some other of the lower animals.

—A California man feeds his family on raw fruit and coarse meal, to his great satisfaction; but when he told an audience of poor men how cheap and wholesome such a diet was, they got angry, and drove him out of the hall.

—The Chicago College of Physicians has been sued by a student who was promised a graduate's diploma at the end of one year's study. The faculty decline to keep the agreement, which was made, they say, by an individual teacher.

—One physician at Urbana, Ohio, said that another had killed a smallpox patient by mistaking the disease for measles. The retort was that the first accuser had caused a death by something worse than a blunder. Suits for damages are in progress.

—Massachusetts has an expensive and efficient State Health Board, with headquarters in the State House. But this did not prevent the Legislature from sitting in a room whose air was pumped in over a sewer, and whose ventilator was boarded up some time ago.

—The London *Engineer*, discussing the inability of man to fly, notes his weakness in physical strength as compared with fowls, and says no flying machine will ever be successful until so constructed that each pound of machine will develop as much energy as each pound of bird.

—In 1881 there were examined in the Municipal Laboratory, Paris, 3,001 samples of wine, of which 271 were found to be good, 991 passable, and 1,731 bad. In the first five months of 1882, 1,869 samples were analyzed, of which 372 were good, 683 passable, and 814 bad—145 of the latter being very injurious.

—A London dentist has invented a lamp for illuminating the cavity of the mouth during dental operations. It is of incandescent carbon, fitted into a vulcanite cup, covered for safety with a glass shade. The lamp is said to give a brilliant light just where it is needed, without producing heat, and the inventor freely offers its advantages to his fellow dentists.

—One of the New York city members in the Legislature at Albany has introduced in the Assembly a bill allowing everybody in the State to practice medicine. His name is Quinn, and, according to the terms of his bill, any man who has sense enough to come in out of the rain may be called on to attend a dying man, no matter whether he be ill of small-pox or a spavin on his leg.

—A man named Stewart has been arrested in Troy, New York, for the alleged murder of a woman. The statement in the papers is that a photograph of the dead woman's eyes disclosed upon the retina a picture of Stewart holding a chair over her head and just in the act of striking her. The matter has been brought to the attention of the Grand Jury. It is as well to add that this sort of evidence is illusive and probably fraudulent—unless the whole story is a hoax.

—Professor Sumner delivered a very incisive lecture in Brooklyn a week or two ago on some of the errors of social reformers. Its substance was

an elaboration of the theory recently put forth, that the death and decay of the drunkards and the vicious were an illustration of the natural law of selection and the survival of the fittest, by which the human race was being improved, and that any interference therewith to preserve them was a contravention of the law of nature.

—The fatalities of the foot-ball ground recur with remarkable regularity. Some of these deaths result from accidents on the field, but more are caused by injury to the constitutions of boys who are physically unfitted for such rough sport. In view of this fact the London *Lancet* makes the suggestion that "no member of a club be allowed to engage in club matches unless free from heart or other organic diseases." This rule might be applied to other athletic games with manifest benefit.

—If the United States Congress desires to do something for the benefit of the country at large, it might well follow the example set by the French Minister of Agriculture, who has placed \$10,000 at the disposal of M. Pasteur, to continue his investigation of contagious diseases of animals. Does Congress know how much money the Department of Agriculture of this country has saved through such investigations already made with entirely inadequate means? When the money value of such investigations becomes known, \$10,000 will seem like a very small amount to be annually appropriated to this one purpose.

#### OBITUARY NOTICES.

##### PROFESSOR BENJAMIN H. RAND, M. D.

Professor Benjamin Howard Rand, a well-known physician and scientist, whose death on Wednesday, at his residence on Summer street above Sixteenth, was announced yesterday, was 56 years of age, and was born in this city. He graduated from the Jefferson Medical College in 1848, and two years later was elected Professor of Chemistry of the Franklin Institute. From 1852 to 1864 he was Secretary of the Academy of Natural Sciences. He accepted the Chair of Chemistry in Jefferson Medical College in 1864, from which ill health forced him to retire in 1877. He was elected a Fellow of the Philadelphia College of Physicians in 1853, and a member of the American Philosophical Society in 1868, and was also a member of the American Medical Association. He was the author of several elementary works on chemistry.

##### DR. R. A. CROCKETT.

Dr. R. A. Crockett, a popular and respected member of society and of his profession, and an old subscriber and regular reader of the *REPORTER*, died at his home in Willirmson county, Tennessee, of hemiplegia, on January 31.

#### MARRIAGE.

WINTERROWD—HOLLAND.—At the Moravian church, in Hope, Indiana, February 15, 1883, by the Rev. F. R. Holland, the bride's father, assisted by the Rev. E. J. Regennae, N. S. Winterrowd, M. D., and Miss Jeanne E. Holland, all of Hope.